

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**



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Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

Rulemaking 18-07-003

**DRAFT 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT PLAN  
OF THE CITY OF SANTA BARBARA**

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Dated: June 30, 2022

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In accordance with the California Public Utilities Commission’s (“Commission”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process* (“ACR”), the City of Santa Barbara (“Santa Barbara” or “City”) hereby submits this Draft 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in ACR sections 6.1-6.16.

Santa Barbara notes that certain issues and requests in these ACR sections apply to the other retail sellers (electrical corporations and electric service providers), and do not extend to Community Choice Aggregators (“CCAs”). Santa Barbara is nevertheless voluntarily responding to these ACR sections in the interest of transparency and in order to collaborate with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR, however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”) 350 or Commission decisions and rulings on RPS Procurement Plan submittals, do not extend to CCAs, and Santa Barbara reserves the right to challenge any such assertion of jurisdiction over these matters.

As indicated in the City’s previously submitted RPS Procurement Plans, the Commission should consider the relatively small size and related administrative structure under which the City intends to operate its CCA program. In particular, Santa Barbara has pursued CCA implementation activities under a shared service model, which means the City has joined together with other, regionally located CCA programs to promote administrative efficiencies by outsourcing many highly specialized services typically required for successful CCA administration and operation. The California Choice Energy Authority, or CalChoice, is a joint powers authority (“JPA”), the members of which include the cities of Lancaster and San Jacinto. CalChoice was formed to help cities in Southern California Edison’s (“SCE”) service territory evaluate, implement, and operate CCA enterprises without having to share or cede (by virtue of proportionate influence during decision making processes) control that could result from participation in larger, multi-jurisdictional JPAs or without independently taking on the significant financial liabilities (*e.g.*, start-up costs, staffing, and ongoing administration) of a single entity CCA. CalChoice is the organization selected by the City to provide requisite services and inter-agency coordination amongst regionally located, single-city CCA programs.

There are currently ten (10) Southern California communities that are being supported under independent administrative services agreements with CalChoice, including the City. These communities include the Town of Apple Valley (doing business as Apple Valley Choice Energy, or “AVCE”; successful CCA launch in April 2017); and the cities of Baldwin Park (formerly doing business as Baldwin Park Resident Owned Utility District, or “BPROUD,” which successfully commenced CCA service in October 2020, then later decided to terminate program operations through an orderly process that resulted in the return of its customers to SCE in March 2022), LCE (successful CCA launch in May 2015), Palmdale (doing business as

Energy for Palmdale’s Independent Choice, or “EPIC”; CCA launch is planned for October 2022), Pico Rivera (doing business as Pico Rivera Innovative Municipal Energy, or “PRIME,” which successfully commenced the delivery of CCA service in September 2017), Pomona (doing business as Pomona Clean Energy; successful launch in October 2020), Rancho Mirage (doing business as the Rancho Mirage Energy Authority; successful CCA launch in May 2018), San Jacinto (doing business as San Jacinto Power; successful CCA launch in April 2018) and Santa Barbara (doing business as Santa Barbara Clean Energy; successful CCA launch in October 2021). CalChoice’s team of experienced CCA practitioners works in cooperation with City and Town leadership to administer CCA operations. Responsibilities for CCA program management are divided, but closely coordinated, amongst these constituents. For example, CalChoice’s team provides key administrative support and advisory services, including the completion of work related to resource planning and procurement (*e.g.*, load forecasting, solicitation administration, contract negotiation support and, specifically related to this RPS Procurement Plan, the administration of functions required to plan for and procure requisite RPS-eligible renewable energy supply). City and Town staff, including elected leadership, take lead roles in reviewing and approving electric generation rates, adopting resource planning policies and creating, implementing and administering locally focused energy programs and, in certain cases, locally situated energy infrastructure projects that support CCA program operations and the interests of participating customers.

The CalChoice service model has not only proven to be highly desirable for many smaller Southern California communities but also critically important in preserving the community-specific oversight and decision-making autonomy that would not necessarily be afforded under a larger, multi-party joint powers agency. Key decisions of each CalChoice-supported community,

including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are independently addressed by the respective governing councils of each community and administered by staff with supporting input from CalChoice's experienced team. The CalChoice model preserves the autonomy of each participating community by applying a "one size does not fit all" support framework, which allows participating communities to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within their respective communities.

In terms of CalChoice's role in supporting the renewable energy planning and procurement functions of each participating community, CalChoice coordinates directly with each community to identify required levels of renewable energy procurement (as specified under California's RPS Program) as well as any above-RPS procurement targets voluntarily adopted by each participating community (that may be related to specific retail service offerings that provide renewable energy deliveries in excess of statewide mandates). Once such targets are established, CalChoice supports discussions focused on future renewable energy planning trajectories, recommended planning reserve margins, necessary long-term contracting requirements, upcoming solicitation administration, and ongoing monitoring of supplier/developer performance to promote alignment between actual and projected renewable energy supply, including the completion of any portfolio balancing activities that may be necessary to close incremental open positions or dispose of unnecessary excess/length. Such discussions between CalChoice and participating communities remain ongoing with opportunities to adjust desired renewable energy parameters over time. The information provided by participating communities is compiled by CalChoice and aggregated, if/when appropriate, to facilitate administratively coordinated procurement efforts. Due to the relatively small size of CalChoice's participating communities,

meaningful administrative efficiencies have been achieved through joint solicitation administration. In particular, otherwise redundant costs and procedural elements, including solicitation administration, counterparty coordination, contract negotiations, and project development milestone tracking, are substantially minimized by coordinating/centralizing such functions/roles through CalChoice. These desirable outcomes are critically important to CalChoice's participating communities by reducing administrative complexities and staffing requirements that would otherwise need to be addressed by each participating community while simultaneously reducing costs that would otherwise burden the financial performance of each CCA program – such an approach allows participating communities to leverage the relatively limited specialized expertise and technical acumen that are needed to successfully administer CCA enterprises without having to independently identify and hire such staff, which could be time consuming and very costly.

Subject to pertinent renewable energy mandates imposed under California's RPS Program, participation in CalChoice's renewable energy procurement processes (meaning solicitations and related contracting efforts) is voluntary, and member communities may independently determine whether or not to participate based on the status of each community in progressing towards such statewide mandates and, if applicable, desired levels of renewable energy procurement in excess of such mandates. CalChoice does not act on behalf of its participating communities without prior direction/authorization, and any contracting processes resulting from CalChoice-administered solicitation efforts are subject to approval by the governing councils of participating communities.

When contemplating resource planning and procurement efforts that will be undertaken by California retail sellers, including the preparation of requisite RPS Procurement Plans, the

City encourages the Commission to consider the stark, undeniable differences between the relatively small communities supported by CalChoice and the state's much larger Investor-Owned Utilities ("IOUs"). The disparate scope and magnitude of procurement responsibilities that must be undertaken by an IOU, relative to a small CCA, necessitate different approaches and organizational support. In the case of an IOU, there will be an entire procurement department available to support requisite efforts, including a team of attorneys, analysts, and other staff members – the level of procurement activities undertaken by an IOU seems to necessitate such an approach. In the case of a small CCA, however, there may only be a few renewable energy supply contracts needed to satisfy pertinent renewable procurement mandates at any point in time – in consideration of the work required to support such efforts, a small CCA would not necessarily want or need to hire several staff members, invest in costly systems or perform elaborate analyses, as the scope of responsibilities that must be undertaken to support RPS compliance activities is relatively narrow in comparison to an IOU. The City encourages the Commission to consider these differences when reviewing/evaluating the respective RPS Procurement Plans submitted by California retail sellers – differing levels of detail, procedure, complexity, and coordination are likely very appropriate within the planning documents submitted by small, medium, and large organizations; and where the Commission may be inclined to identify informational deficiencies in certain areas (based on inevitable differences between content provided in the RPS Procurement Plans of California's IOUs and smaller CCA programs), the City encourages the Commission to consider the inappropriateness of a "one size fits most/all" approach in managing widely varying RPS planning and procurement obligations. While there may be some commonalities amongst planning and procurement practices reflected in the various RPS Procurement Plans submitted through this process, it seems reasonable to

assume that noteworthy differences will be prevalent.

With regard to the City, its participation in CalChoice's shared service model will result in inevitable similarities when comparing the RPS Procurement Plans submitted by each participating community – due to the coordinated approach undertaken by CalChoice, key planning elements and procurement processes may, in fact, be identically described in each participant's respective RPS Procurement Plan. The City respectfully requests that the Commission consider this inevitability while reviewing its RPS Procurement Plan – the similarities between planning documents submitted by CalChoice's participating communities are reflective of thoughtful coordination, an interest in promoting administrative efficiency, and an effort to suppress planning and procurement costs that would be much higher if each participating community independently managed such efforts. To the extent that CalChoice remains successful in promoting inter-agency coordination and efficiencies, participating customers are expected to benefit via retail rates that pass through the benefits of such efforts.

The Commission is also encouraged to consider the differing operational stages (and, in the City's case, pre-operational stages) of reporting load serving entities ("LSEs"). Certain direction and guidance provided by the Commission seems to suggest that each element of the RPS planning process should be universally applicable across all LSEs, regardless of pertinent operational status, and that is not the case. For example, it is likely inappropriate and unhelpful for a newer CCA organization, like the City, to prepare a ten-year negative price forecast or curtailment analysis when existing contractual commitments (or lack thereof) would render such information irrelevant and unhelpful – given the heightened attention and related information focused on changing market conditions, increased incidents of negative pricing and related energy curtailment, all LSEs are aware, to some extent, of these potential risk factors, but that



does not mean a related forecasting effort or other form of analysis would provide useful information to each LSE. For example, a generalized ten-year negative price forecast or curtailment analysis would have no meaning for a new LSE without existing contractual commitments or if its contractual commitments did not expose the buyer to negative price risk (due to the application of settlement mechanisms and/or fixed volumetric commitments that eliminate such concerns or the specification of fixed delivery quantities). Similarly, it would not make sense for an LSE to prepare forward curtailment estimates if its renewable contract portfolio primarily included fixed volume supply commitments or did not allow discretionary curtailment via terms and conditions reflected in such contracts. Again, the City encourages the Commission to consider the appropriateness of universally requiring certain information within this planning process when such information may not be relevant or useful to the reporting entity (or other parties that may choose to review such information) – certain sections of these plans should be marked as “if necessary” or “if applicable” without the assumption that all LSEs should be comprehensively responsive in addressing such topics.

With regard to understanding the consequences of compliance shortfalls, the communities supported by CalChoice have been advised of both direct (*e.g.*, financial penalties and findings of non-compliance) and indirect (*e.g.*, reputational damage that might accrue to participating communities or CCA organizations, generally) impacts associated with such deficiencies and have chosen to pursue risk mitigation measures that are considerate of each participating community’s aversion to such risks as well as the related administrative complexity, cost and rigor that were deemed appropriate to achieve the desired level of mitigation in the unlikely event that they occur.

In considering its evolving informational needs, the City has engaged CalChoice to prepare a more robust risk assessment, as reflected in this RPS Procurement Plan. Details related to this risk assessment are further described below and focus on the City's current portfolio of RPS supply agreements, evaluating potential portfolio impacts related to lower-than-expected deliveries and contract failure/termination amongst other considerations. In reviewing its analysis, the City feels confident that its MMoP, as further described herein, and general RPS procurement strategy will satisfactorily address applicable compliance mandates throughout the planning period.

Again, the relatively small communities and related renewable energy procurement efforts supported by CalChoice are not comparable to the geographic footprint and/or procurement efforts undertaken by the incumbent utility, SCE; individual communities supported by CalChoice tend to have annual renewable energy procurement targets ranging from 50-300 gigawatt hours, while SCE is expected to procure thousands upon thousands of gigawatt hours to meet its respective obligations. The significance of these differences and the complexity of related procurement efforts, including the myriad contracts typically required by larger entities, necessitate a much different scope of procedural considerations and risk mitigation measures – the RPS Procurement Plans submitted by the IOUs should not be the standard by which all other Plans are measured.

### **I. Major Changes to RPS Plan**

This Section describes the most significant changes between Santa Barbara's Final 2021 RPS Procurement Plan and its Draft 2022 RPS Procurement Plan. A redline of this Draft 2022 RPS Plan against Santa Barbara's Final 2021 RPS Plan is included as Appendix A. The City reminds the Commission that it is a relatively new CCA organization, which has yet to

commence operations. As such, much of the detail requested in recently added sections will not be available until the City completes its initial renewable contracting efforts, commences operations, and gathers information related to supplier performance during early-stage operations. In the meantime, pertinent information is limited and subject to further development in future RPS Procurement Plans. The table below provides a list of key differences between the 2021 and 2022 RPS Procurement Plans:

<b>Plan Reference</b>	<b>Plan Section</b>	<b>Summary/Justification of Change</b>
2022 RPS Procurement Plan: Section II	Executive Summary	Updated to reflect the changes made throughout other sections of this RPS Plan.
2022 RPS Procurement Plan: Section IV	Portfolio Optimization	Updated to describe Voluntary Allocation Market Offer proposal/framework approved in Decision 21-05-030 and subsequent decisions and resolutions, and potential RPS planning implications. Updated to describe procurement undertaken to comply with D.21-06-035, the Mid-Term Procurement Decision.
2022 RPS Procurement Plan: Section VI	Potential Compliance Delays	Updated narrative to incorporate changing renewable energy procurement marketplace.
2022 RPS Procurement Plan: Section VII	Risk Assessment	Added new risk assessment.

## **II. Executive Summary**

Since the City’s submittal of its Final 2020 RPS Procurement Plan, which occurred on February 18, 2021, the City’s CCA planning and implementation activities led to CCA service commencement in October 2021. As indicated in its Community Choice Aggregation Plan and Statement of Intent (“CCA Implementation Plan”), which was electronically served on all parties of record in proceedings R.17-09-020, R.16-02-007, and R.03-10-003 on November 1, 2019, the

City initially intended to initiate CCA customer service on May 1, 2021, providing electric generation service to approximately 34,000 service accounts located within the City, which are expected to consume approximately 290 GWh per year. Since that time, however, the City participated in numerous coordinative discussions with SCE, which resulted in delays to the previously noted implementation timeline. Due to SCE system enhancements, which were purported to present issues with CCA launch/enrollment activities, the incumbent IOU had limited windows of time that would accommodate CCA enrollment activities. As a result of these restrictions, the City and SCE agreed to support CCA launch in October 2021. With this timeline in mind, the City continues to evaluate key elements of the RPS Program and related planning implications, including the need to establish an appropriate minimum margin of procurement (MMoP) for necessary renewable energy supply, prospective compliance risks related to requisite long-term renewable energy procurement, the manner in which project development and performance risk will be assessed during the City's renewable energy procurement efforts, and various other considerations related to the RPS Program. As reflected in its CCA Implementation Plan, the City meaningfully exceeds statewide RPS procurement mandates, supplying 75% renewable energy to the majority of its customers (via a 75% renewable/100% carbon-free default service offering), which provides a voluntary margin of procurement (VMoP). This procurement exceeding statewide procurement mandates, in combination with the MMoP, provide an ample cushion in the event that contracted renewable energy purchases are not fulfilled as expected. This adaptation to Santa Barbara's originally intended default service offering, which was targeting the use of 100% renewable energy, was deemed necessary to improve cost competitiveness of CCA generation rates while promoting resource planning flexibility during early-stage program operations. It is also worth noting that

the entirety of the City's RPS procurement will be focused on PCC1 product options, alleviating any concerns related to portfolio balancing requirements (brought about by the use of PCC2 and PCC3 products) while facilitating achievement of the City's 100% carbon-free goal for default CCA service.

Based on the delay imposed on the City's original implementation schedule, the City revised the anticipated schedule for requisite renewable energy procurement activities, which attempted to balance concerns related to premature contractual commitments and the achievement of RPS compliance. In particular, the City determined that it needed to avoid making contractual commitments until it had a definitive schedule related to the timing of service initiation and customer revenue receipt(s). Now that CCA implementation timing is more certain, the City has solidified its procurement schedule as described below. This schedule of procurement activities, which remains subject to change, will be necessary to promote early stage compliance with California's RPS Program, including requisite long-term contracting requirements is as follows: (1) Q1 2021 (COMPLETE) – finalization of anticipated renewable energy requirements, inclusive of a resultant minimum margin of procurement (relative to the City's intended plan to offer 75 percent renewable energy as its default service option); (2) Early-Q2 2021 (COMPLETE) – finalization of solicitation requirements and schedule, inclusive of any resource-related specifications, supplier qualifications and evaluation criteria; (3) Late-Q2 (COMPLETE) – release of long-term renewable energy solicitation, receipt of responses, evaluation of responses and short-list selection; (4) Late-Q2 2021 (COMPLETED) – bid receipt (on June 11, 2021), identification of preferred supplier(s) and commencement of contracting efforts. Unfortunately, after examining the bids and further discussions no RPS deals resulted from this long-term RPS solicitation.

The City has also completed negotiations related to its first long-term renewable energy supply agreement. This opportunity was identified via bilateral discussions with an experienced supplier of PCC1 products, Powerex, which has worked with numerous CCA organizations. The agreement covers a ten year period with an average of 50,000 MWh of project energy delivered every year.

In the meantime, the City will continue evaluating and solidifying pertinent renewable energy planning activities, including the need to establish a minimum margin of procurement and a voluntary margin of procurement in light of the City's intent to supply 75 percent renewable energy through its default service option, specifications to be included in future solicitations for requisite renewable energy supply, the manner in which project development and performance risk will be assessed during the City's renewable energy procurement efforts, and various other considerations related to the RPS Program. The City is also gaining insight and additional information related to CalChoice's recent experiences administering a long-term renewable energy solicitation on behalf of its operational CCA participants. The information gained from such experience will facilitate the refinement of future solicitations involving the City and (hopefully) the recruitment of well-suited, cost-competitive renewable energy offers from experienced developers and facility operators.

Until additional details are gathered with regard to early-stage performance by the City's renewable energy suppliers (which will not occur until the City places renewable energy supply under contract and successfully launches CCA activities), City staff, in cooperation with CalChoice, will wait to evaluate the City's residual RPS open positions (that may exist after initial RPS contracting efforts are complete) and any subsequent procurement activities that may be necessary to promote achievement of desired RPS procurement targets, including any related

planning reserves. Analysis of the amounts of wind and solar curtailments in the CAISO over the 2018-2021 period show that curtailments were well below 1% of total load, and under 5% of the total renewable generation related to these specific technology types. Initial discussions and analyses have led to the City's adoption of a minimum margin of procurement of 2% of its voluntary RPS procurement target of 75%, which equated to 1.5% of total retail sales. The difference between the City's chosen 75% renewable default service and the state mandated RPS percentage is the City's voluntary margin of procurement. The City believes that the MMoP and VMoP will provide adequate "cushion" in meeting applicable compliance mandates, should expected renewable energy deliveries fall short of projections.<sup>1</sup> This approach would provide the City with a significant surplus, relative to statewide mandates, virtually eliminating the possibility of compliance shortfalls. The City also acknowledges that such a margin could be evaluated and adjusted on an as-needed basis in consideration of the manner in which actual renewable energy purchases/deliveries track with related projections and also applicable statewide mandates, renewable product availability, budgetary impacts, participation in the City's opt-down service option and various other considerations.

Looking ahead to the balance of 2022 (as the City continues CCA implementation activities), the City and CalChoice are committed to administering renewable energy solicitations on an as-needed basis to ensure an appropriate level of both short- and long-term renewable energy commitments, the latter of which will be intended to facilitate compliance with California's 65% long-term contracting requirement, which became effective in 2021. Given the City's launch in October 2021, it is likely that initial renewable energy procurement activities will be administered according to the previously identified schedule. In considering its long-

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<sup>1</sup> See Section IX below for a more detailed explanation.

term renewable energy procurement obligations, the City acknowledges that certain new-build contracting opportunities, which typically entail long-term purchase commitments, may need substantial lead time before related renewable energy production occurs. Ensuring that renewable energy deliveries associated with such projects dovetail with the City's mandated RPS purchase will require careful planning, selection of proven project developers and thoughtful consideration of ongoing renewable planning reserves to promote alignment of actual and projected renewable energy needs. Also related, the City expects that one or more of its initial long-term renewable energy contracts may need to utilize existing or soon-to-be-operational renewable generating facilities to ensure timely compliance with applicable long-term procurement requirements. With time, the City remains optimistic that it will be able to facilitate a certain level of new renewable infrastructure buildout through its ongoing renewable energy contracting efforts. Given the success of CalChoice's recent renewable energy solicitations and the City's relatively small retail electric load, the City is confident in its ability to identify sufficient levels of renewable energy supply and will work diligently to secure such supply prior to launch and during ongoing operations, including the consideration of short- and long-term RPS volumes available via VAMO.

As part of its ongoing planning process, the City is also considering the manner in which renewable energy compliance risks will be assessed. The City has further considered this topic after submitting its Final 2021 RPS Procurement Plan and determined that an enhanced risk analysis would be instructive in assessing the sufficiency of its MMoP and other variables that could impact planned renewable energy deliveries. The results of this analysis are presented below, including a description of the methodology that was applied in completing such analysis. Based on the results of its analysis and previous guidance from CalChoice, the identification and



selection of highly experienced and financially viable renewable energy sellers remains the single most important consideration in promoting the achievement of RPS compliance – by pursuing supply commitments from such sellers, including the specification of contract terms that narrow compliance risk (through firm, fixed delivery quantities or relatively high energy delivery guarantees, the City and CalChoice believe that the substantial majority of future delivery risk is avoided

This Draft RPS Procurement Plan also addresses new requirements specified in the April 11, 2022 ACR, including updates that reflect an extended planning period, through 2032, as well as recently completed risk assessment; the Draft Plan was also updated to some preliminary information regarding the City’s intent to participate in the VAMO process.

### **III. Summary of Legislation Compliance**

This RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission’s regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that Santa Barbara will meet such requirements.

SB 350 (stats. 2015) was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision (“D.”) 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement requirements for long-term contracts and owned resources, as well as revising the excess procurement rules.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission instituted Rulemaking 18-07-003 to continue the implementation of the RPS. On May 28, 2019, the Commission issued a proposed decision that would continue to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into Santa Barbara's Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. Santa Barbara's planned procurement, as reflected in Santa Barbara's Renewable Net Short Calculation Table and described in Sections IV and V, is expected to be more than sufficient to exceed these targets, including a substantial margin of over-procurement based on Santa Barbara's intent to offer 75% renewable energy as its default retail service option. This approach serves as the City's most prominent risk mechanism in addressing prospective compliance shortfalls, as further described in Sections VII and IX. Santa Barbara also expects to meet California's SB 350 long-term procurement requirement, as described in Sections V and VII, through upcoming solicitation processes – as previously noted, the City is engaged in late-stage contract negotiations related to its first long-term RPS supply contract; contract execution is expected in early Q3 2021.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any IOU, publicly owned electric utility, or CCA with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date

to be five years later than the expiration date that was operative as of 2018. The City has yet to execute its first renewable energy supply agreement and, as such, does not have a contract with a biomass facility that is covered by Public Utilities Code section 8388.

As a public agency, Santa Barbara takes official support positions on legislation through a formal vote of its governing council. Information on the City's official support positions, including a support letter if applicable, will be made available as part of the agenda packet related to the Council Meeting at which such vote occurs. The City may also post a press release regarding official positions on major legislation to the City's website. Because the City only takes support positions through the formal actions of its governing council, it cannot identify any future legislative efforts that it may support.

#### **IV. Assessment of RPS Portfolio Supplies and Demand**

##### **IV.A. Portfolio Supply and Demand**

The City commenced CCA service in October 2021. Santa Barbara's CCA Implementation Plan indicates the City's intent to serve approximately 34,000 service accounts, which are expected to consume about 290 gigawatt hours per year following the completion of all customer enrollment activities. Santa Barbara has commenced resource planning activities that will be necessary to provide for requisite quantities of renewable energy as well as other energy and capacity products (and services) during early-stage and ongoing program operations. Ongoing procurement efforts are expected to result in the execution of one or more renewable energy supply contracts that will contribute to Santa Barbara's achievement of RPS compliance mandates. Santa Barbara remains aware of pertinent elements reflected in California's RPS Program, including long-term renewable energy contracting obligations, and intends to meet or exceed such requirements throughout its operating history. While its first long-term renewable

supply contract is complete, Santa Barbara expects to pursue a variety of other renewable energy supply agreements (of various term lengths and structures) with the goal of assembling a diverse renewable contract portfolio. Exact portfolio characteristics may vary depending on direction received from Santa Barbara's governing council, renewable resource availability, procurement costs, legislative and policy changes, technological improvements, preferences of the community, or other developments, such as the procurement ordered in Mid-Term Reliability decision, D21-06-035. To manage this future uncertainty, Santa Barbara will regularly evaluate anticipated supply requirements in consideration of expected customer electricity usage and will structure its future procurement efforts to balance customer usage with requisite resource commitments. This examination of customer electricity usage and other market developments will help reduce costs and assist in meeting planned procurement for the period reflected in this RPS Procurement Plan.

Santa Barbara is also attempting to gain an improved understanding of the prospective impacts to its customer base associated with the potential reopening of California's direct access market due to SB 237 (2018) and D.19-05-043. In D.21-06-033, the Commission recommended against expanding direct access at this point, however, the City recognizes that this may change in the future. The City will monitor direct access for any changes that may result in future adjustments to Santa Barbara's load forecast and related renewable energy procurement obligations, which would be expected to decrease if Santa Barbara loads migrate to direct access providers – in theory, such a change would push Santa Barbara's renewable energy content higher unless surplus supply was sold to other market participants; this would be similar to the impacts experienced by California's IOUs, which have resulted from ongoing CCA implementations and expansions – following these activities, the proportionate RPS

content of each IOU has increased, as evidenced in the annual Power Source Disclosure Report of each IOU (for reference, this has occurred in spite of IOU-administered solicitations intended to sell off surplus RPS supply, which suggests that other retail sellers, particularly CCAs, have already made meaningful progress in meeting applicable RPS mandates in the near-term planning horizon). To the extent that any adjustments to the City's retail sales forecast are made, it will reflect such adjustments in a subsequent RPS Procurement Plan. Through the ongoing evaluation of customer demand and other market developments, Santa Barbara hopes to influence reduced overall costs while meeting planned procurement objectives for the period addressed in this RPS Procurement Plan.

Also, as COVID-19 cases generally decline and mobility restrictions continue to relax, the City will continue to monitor retail sales in the event that any meaningful deviations from historical norms happen to surface. The City will also monitor any changes that might arise from ongoing inflationary pressures and the implementation of higher interest rates that are being applied by the federal government to manage such inflation. Much like load-related impacts throughout the pandemic, the City understands that customer energy use within California's current period of economic uncertainty (meaning, the "high inflation, rising interest rate" environment being experienced throughout the country) and the post-pandemic recovery period may be difficult to predict and easily obscured by typical variations in weather. Following its launch and during early-stage operations, the City will closely evaluate available data, attempting to parse various impacts on retail electricity consumption while incorporating adjustments to its planning assumptions on an as-needed basis. Regardless of near-term load volatility, the City remains confident that its internally adopted MMoP will virtually eliminate the potential for compliance deficits.

#### **IV.A.1. Voluntary Allocation and Market Offer (VAMO)**

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a VAMO framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. LSEs will also be able to acquire resources through the VAMO structure that will be considered long-term contract resources.

The Commission recently approved D.22-06-024, which provided additional guidance on the VAMO process, as well as Resolution No. E-5216, which approved the IOUs’ pro forma contracts for the voluntary allocations. The IOUs have also filed advice letters outlining their market offer processes for resources not allocated through the voluntary allocations; approval for these processes is expected later this year.

The process for voluntary allocations is currently ongoing and is expected to be concluded in July 2022. The City is currently evaluating its needs, as well as available VAMO allocations for both long-term and short-term RPS energy and expects to finalize its choices in July 2022. At this time, the City is only prepared to indicate that it expects to accept certain quantities available via VAMO, but the extent to which available allocations will be accepted

remains uncertain. As such, the City plans to file an update in August 2022, informing the Commission on the results of its participation in the VAMO process.

#### **IV.A.2. Portfolio Optimization**

The City's goal is to meet its locally adopted policies and statewide mandates in a manner that is both cost effective and supportive of a well-balanced resource portfolio. Portfolio optimization strategies can help reduce costs and should facilitate alignment of the City's portfolio of resources with its forecasted load needs. To support this goal, the City regularly considers the following strategies:

**Joint Solicitations:** Joint solicitations can expand the procurement opportunities available to a CCA, as well as potentially provide better contract terms. The City recently participated in the CalChoice, Desert Community Energy Authority and Clean Energy Alliance solicitation for Mid-Term Reliability (MTR) resources and long-term renewable energy supply and intends to continue participating in such joint solicitation activities as part of the shared services arrangement that it has in place with CalChoice. The City may also participate in additional joint solicitations through CalChoice with other CCAs.

**Purchases from Retail Sellers:** Purchases of RPS-eligible renewable energy (via resale) from other retail sellers can provide a cost-effective way of meeting short term resource needs or filling in gaps in procurement while long term projects are under development. After commencing operations later this year, the City will evaluate solicitations offered by other retail sellers, as necessary.

**Sales Solicitations:** As the City's portfolio of resources continues to develop, it will also consider offering solicitations of sales to other retail sellers, if the disposition of surplus is deemed desirable.

**Optimizing Existing Procurement:** As the City considers its long-term resource needs, it may evaluate options in its future power purchase agreements to increase the output of existing generating facilities through technological upgrades or by adding new capacity to an existing generator. Expanding existing facilities may provide additional generation at reduced costs with a lower risks of project failure because the need for distribution system upgrades and permitting may be reduced – such opportunities may be developed, as deemed appropriate by the City.

On June, 24 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity (“NQC”) between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. The City’s total obligation is 13 MW, which must include minimum amounts of procurement from certain subcategories: (1) 3 MW from firm, zero-emitting capacity by 2025; (2) 1 MW from long duration storage resources by 2026; and (3) 1 MW from firm, non-fossil fueled baseload generating resources by 2026. The City is currently evaluating a range of procurement options for meeting its D.21-06-035 obligations. This procurement was addressed through the request for proposals conducted jointly by CalChoice, Desert Community Energy Authority, and Clean Energy Alliance described elsewhere in this RPS Procurement Plan. This includes participating in a CalChoice joint solicitation with Clean Energy Alliance and Desert Community Energy to procure additional resources to meet MTR Procurement requirements. The joint solicitation was issued January 4, 2022, with proposal due February 4, 2022. Options to be considered range from RA-only contracts to renewable generation, including that paired with storage and stand-alone storage contracts with various different energy structures. While RPS-eligible generation would provide an added benefit, it is not the primary objective or deciding factor in determining which procurement options will ultimately be selected. If the City does meet any of its D.21-06-035 procurement obligations with renewable generation, then that generation may be in addition to the planning and forecasting described in this RPS Procurement Plan. The City will try to optimize its RPS procurement with the requirements from D.21-06-035 and will hopefully be able to harmonize these procurements to reduce costs, improve resource dispatchability (to better align renewable resource delivery profiles to the City’s load profile) and avoid any need to over-procure resources.



## **IV.B. Responsiveness to Local and Regional Policies**

### **(i) Responsiveness to Policies of Santa Barbara’s City Council**

Santa Barbara is a local governmental agency that is subject to the control of its governing council and is directly accountable to the community that it serves. Santa Barbara supports and is committed to meeting the state’s GHG reduction and renewable procurement goals. Furthermore, and as noted elsewhere in this RPS Procurement Plan, the City has adopted a 75% renewable energy portfolio for its default CCA service offering. In addition to the noted quantity of renewable energy, the City intends to procure the balance of its projected energy requirements from carbon-free sources (providing customers receiving the default retail service offering with a 100% carbon-free resource mix), notably regionally produced hydroelectricity or Asset Controlling Supply. The City’s renewable energy portfolio will be exclusively comprised of PCC1 product, which should provide the City with substantial renewable energy surplus relative to statewide procurement mandates. This anticipated portfolio composition will remain in effect for the first two years of CCA program operation after which the City intends to replace supplemental carbon-free energy (comprised of hydroelectricity or Asset Controlling Supply) with additional PCC1 supply, subject to product availability and budgetary impacts. The default CCA service offering was identified to support the City’s commitment to increased renewable energy use and greenhouse gas emission reductions. It is worth noting that the City’s CCA customers are permitted to voluntarily “opt-down” to an alternative service option offering lower levels of renewable energy (and reduced rates, relative to the default service option), but previously conducted outreach efforts suggest that opt-down elections are expected to represent a very small proportion of the City’s customer base. As a result of the City’s internally adopted policy related to its CCA program’s supply portfolio, renewable energy planning and

procurement assumptions have been adapted to support achievement of such objectives – the City’s Renewable Net Short template accordingly reflects a relatively large Voluntary Margin of Over-Procurement to support the City’s achievement of desired portfolio characteristics.

(ii) Responsiveness to Regional Policies

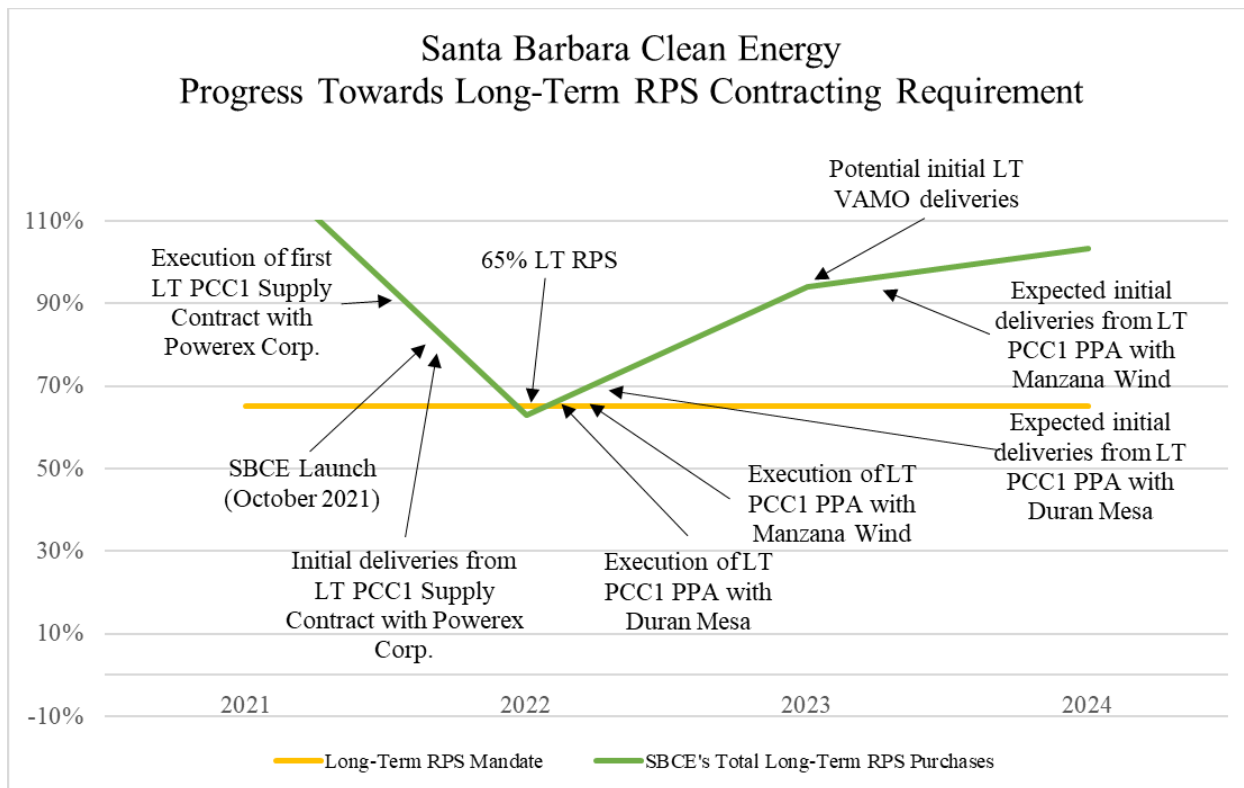
As noted in the previous sub-section, the City is overseen by its governing council, which also serves as the governing board/authority for its CCA program. As such, the policies adopted by the City’s governing council (related to CCA operations) serve as guiding directives for CCA operations, including the determination of renewable energy planning targets that are intended to support local policy preferences. Furthermore, the City has adopted an aspirational target of carbon neutrality by 2035, placing significant emphasis on vehicle and building electrification and leveraging the City’s carbon-free portfolio to reach its goals.

**IV.B.1. Long-term Procurement**

The City’s long-term renewable procurement efforts are underway with its first contract having recently been signed and deliveries commenced. Subsequent long-term contracting efforts will be required to meet applicable RPS mandates, and the City expects to regularly engage in jointly administered renewable solicitations via its association with CalChoice to achieve prescribed levels of long-term renewable procurement. The City anticipates the execution of multiple long-term supply agreements during the first few years of program operations. Currently, the City expects to meet the 65% long term RPS contracting requirement later in 2022 after a second long-term RPS supply contract is signed and deliveries begin.

The City’s schedule of procurement activities, which is subject to change, that will be necessary to promote early stage compliance with California’s RPS Program, including requisite long-term contracting requirements included participation in a CalChoice solicitation which was

released in the second quarter of 2021, with responses received on June 11, 2021. Unfortunately, these solicitation did not result in any new contracts. The City continues to work with CalChoice on additional solicitations for long term RPS resources. As previously mentioned, the City has signed a ten year agreement with Powerex that will provide an average of 50,000 MWh of long-term PCC1 products annually commencing in 2021. The following chart reflects the City's current and anticipated progress in meeting California's long-term RPS contracting mandate in Compliance Period 4 and beyond. Note that this chart does not include the City's anticipated VAMO elections, which could meaningfully increase its long-term RPS positions beyond those reflected below. Prospective contracts expected to result from the upcoming procurement process described below are marked as "second LT PCC1 PPA - Supplier TBD" in this chart.



To the extent currently on-going procurement processes are unsuccessful in securing necessary incremental long-term RPS supply, the City will expeditiously administer subsequent solicitations until such supply is satisfactorily addressed via contract commitments. The City understands that fulfilling upcoming long-term contracting requirements may be somewhat iterative and dependent upon the acceptance of available VAMO allocations as well as any offers that may be received through future solicitation processes (and related contracting successes). In the event that the City enters into another contract with a new-build renewable generating facility, it will closely monitor project development progress and contract/project performance to ensure that actual long-term deliveries meet or exceed pertinent requirements. Any future long-term contracting efforts, including the acceptance of any long-term VAMO allocations, will be described in subsequent RPS Procurement Plans.

#### **IV.C. Portfolio Diversity and Reliability**

In carrying out its planning functions, Santa Barbara has considered and will continue to consider the deliverability characteristics of its future generating resources placed under contract (such as the resource's dispatchability, available capacity, and typical production patterns) and will review the respective risks associated with short- and long-term purchases as part of its forecasting and procurement processes. These efforts should lead to a more diverse resource mix, address grid integration issues, and provide value to the local community. A quantitative description of this forecast is attached to this RPS Procurement Plan in Appendix C.

While the City is not opposed to considering emerging renewable generating technologies, it is unlikely that its initial supply agreement(s) will focus on such resources – the

City has yet to receive credible and cost-competitive proposals from emerging renewable generating technologies, but if such proposals arrive in the future, they will be closely considered alongside other viable options. As a new CCA organization, the City's initial renewable supply commitments must result in reliable, cost-effective supply to promote compliance with applicable RPS mandates without bearing the risks typically associated with newer technologies. Until compelling proposals for emerging renewable generating technologies are received, the City will likely exhibit preferences for "tried and true" generating technologies that will minimize delivery risk during early-stage operation while allowing for re-shaping of certain renewable generating profiles to better align supply with demand. while allowing for re-shaping of certain renewable generating profiles to better align supply with demand

The City will procure renewable and other requisite energy products, as necessary, to ensure that the future energy needs of its customers are met in a manner that promotes reliability and cost-effectiveness, consistent with applicable compliance mandates. The City, through its CCA Implementation Plan, has established initial procurement targets for requisite renewable energy supply, including subcategories for various renewable energy products, and has also established targets for related planning reserves as described elsewhere in this document. To the extent that the City's energy needs are not fulfilled through the use of renewable generating resources, it should be assumed that such supply will be sourced from carbon-free and/or conventional energy resources, such as hydroelectric or natural gas generating technologies as well as system power purchases.

The City intends to utilize a portfolio risk management approach as part of its power purchasing program, seeking low-cost supply (based on then-current market conditions) as well as diversity amongst technologies, production profiles, project sizes and locations,

counterparties, lengths of contract, and timing of market purchases. During early-stage renewable portfolio composition, it seems reasonable to assume that the City's initial supply portfolio may include a relatively small number of contracts which will grow in number over time, increasingly emphasizing the principles of resource and counterparty diversity as operational experience is gained and renewable energy requirements increase.

A key component of the City's early-stage planning process will relate to the analysis and consideration of expected load obligations with the objective of closely balancing supply/demand, cost/rate stability, and overall budgetary impacts. During pre-launch activities, this process primarily focuses on the compilation and analysis of historical customer data, as provided by SCE. Similar to most CCAs, the City expects that such historical data will not be a perfect predictor of future customer energy requirements, so it intends to actively monitor actual customer usage, relative to projections, over time, refining such forecasts as well as its ability to minimize variances between procured energy quantities and actual usage. The City is committed to developing an accurate understanding of the manner in which its customers use electric power to promote an efficient and cost-effective procurement process. The City also plans to maintain portfolio coverage targets of up to 100 percent (of expected customer energy requirements) in the near-term (0 to 2 years) but will likely leave larger open positions in the mid- to long-term, consistent with generally accepted industry practices.

As part of its developing an understanding of how its customers use electric power, the City maintains load curves that reflect expected increases in load due to both transportation electrification and building electrification. Transportation electrification planning considers personal light duty vehicles, electrification of fleets and local targets for electrification of public transit systems. Contracting with a diverse set of renewable resources from different locations

throughout California and the West will be necessary to accomplish the goal of aligning a renewable energy portfolio to the City's load curves.

At this point in time, the City has no explicit preference for specific renewable generating technologies and will consider all responses to its solicitations with the goal of assembling a diversified renewable energy supply portfolio over time that will deliver energy in a profile that is generally consistent with the City's anticipated load shape. The City is also aware that use of intermittent renewable generating technologies has the potential to create occasional misalignments between customer energy consumption and related power production as well as the general quantity of renewable energy received from such projects. In order to better align the quantities of renewable energy with load, and help reduce variances between actual and expected quantities of renewable energy, the City is considering both stand-alone storage and hybrid or co-located storage and renewable energy projects.

#### **IV.D. Lessons Learned**

As a new CCA, Santa Barbara is gaining familiarity and experience with the information and processes that will be necessary to demonstrate compliance with the requirements of California's RPS Program. In communicating with and reviewing the RPS Procurement Plans of California's most mature CCA organizations as well as considering its own experiences in developing an RPS portfolio, the City observes that geographic diversity remains an important element in selecting renewable energy resources/contracting opportunities. The City observes that certain areas of the state have been overbuilt with renewable generating infrastructure, which has created challenges related to depressed market prices and increasing levels of resource curtailment. The City will keep this observation in mind when assembling its own renewable resource portfolio, avoiding overcommitment to resources within a narrowly defined geographic

area. Based on communications with CalChoice and other CCAs, the City is also beginning to evaluate historical pricing trends, which have materially changed in the wake of increased renewable energy buildout. Due to these transitions and suppressed (and oftentimes negative) market pricing, the City will likely avoid contracting with generators located in certain areas or require substantial storage capacity (operated in parallel with renewable generating infrastructure) to mitigate market price risk when considering renewable generating resources located in such areas. The City appreciates the substantial financial risks that are created by California's long-term renewable contracting requirements and will continue to explore opportunities to manage such risks during its contracting efforts.

## **V. Project Development Status Update**

As described in Section IV.B above, Santa Barbara's planned procurement is expected to be sufficient to meet both the applicable RPS procurement requirements as well as support the state's GHG reduction targets. Further, Santa Barbara's planned procurement is expected to support system reliability by considering both portfolio diversity and alignment with Santa Barbara customers' load curve.

Santa Barbara has completed its initial renewable energy contracting process, but the Powerex contract uses existing facilities so the City does not have any updates to report regarding project development status. As such, Santa Barbara has no information to include in the Project Development Status Update Report, Appendix D. As new information related to the City's renewable energy contracting process(es) becomes available, it will update its Project Development Status Update Report accordingly.



## **VI. Potential Compliance Delays**

As a new CCA organization, which has just begun customer service, Santa Barbara is actively engaged in the planning processes required to promote RPS compliance during early-stage and ongoing operation of its CCA program. Such efforts include communicating with CalChoice regarding ongoing planning and procurement associated with the operational and soon-to-be operational CCA programs that it supports and gaining helpful information regarding how such experiences may impacts the City's eventual procurement process(es). As the City did not commence CCA service until October 2021, no compliance delays will occur in Compliance Period 3, which includes calendar years 2017-2020, and none are expected in the current compliance period either (Compliance Period 4, including calendar years 2021-2024).

As a small CCA, the City recognizes that its portfolio of resources will be more limited than larger LSEs and that delays in online dates and reduced generation from the RPS contracts may have significant impacts on both its level of RPS and its progress to achieving 65% from long term contracts. The City has discussed this topic with CalChoice, which continues to manage such risk through the screening and evaluative processes associated with its renewable energy solicitations. In particular, a key element of proposal evaluation focuses on the identification and selection of highly experienced and financially viable renewable energy sellers – by pursuing supply commitments from such sellers, the City and CalChoice believe that the substantial majority of future delivery risk is avoided. This will be accomplished by completing a rigorous review of each prospective supplier's development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other considerations. During the

completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration. The results of this process have led CalChoice, in cooperation with the City, to determine that further quantitative risk assessments have not been necessary thus far. In the future however, based on evolving market conditions, supplier interest or other circumstances, the City and CalChoice could determine that completion of quantitative risk assessments may be necessary and appropriate, depending upon the renewable energy procurement opportunities that happen to be pursued. The City is also considering the extent to which it may accept long-term allocations available under the VAMO process, which would augment existing long-term RPS positions.

If a future compliance issue is identified or the City encounters challenges in securing requisite renewable energy supply in the future, then Santa Barbara will address such issue within a subsequent RPS Procurement Plan.

As the Commission is aware, successful renewable energy markets depend upon international supply chains, substantial labor commitments, robust financial markets, timely interactions with governmental planning authorities and various other considerations. With numerous disruptions caused by the COVID-19 pandemic and various other challenges, it is incredibly challenging to determine if, and to what extent, renewable energy procurement opportunities may be compromised, particularly new-build renewable energy projects which typically rely on long-term contracts as the basis for project financing. The City will closely monitor energy usage patterns to determine if any planning adjustments may be necessary based on the current and expected economic conditions.

The City intends to closely monitor this situation as well as potential fallout related to supplier/developer effectiveness in fulfilling mandated renewable energy needs, project

completion and overall supplier viability – the City is aware that many supply chains have been disrupted during the pandemic with a variety of material/component shortages occurring throughout the industry; recent concerns regarding the application of tariffs on certain imported renewable infrastructure have also provoked certain supplier to request “reopening” of previously executed contracts and/or the negotiation of terms that allow for price adjustments in the event of unexpected costs (such as the noted tariff). While the tariff issue seems to be temporarily resolved, concerns of this nature have introduced a measure of instability in the long-term contracting efforts of many retail sellers. With these concerns in mind, the City encourages the Commission to closely monitor and potentially reconsider certain elements of the RPS Program as this situation evolves, particularly if there are widespread, well-documented challenges as California retail sellers attempt to fulfill pertinent procurement requirements. Related, the City is aware of numerous instances in which contract documents are being drafted with more expansive force majeure language to alleviate the concerns of sellers/developers in meeting project completion schedules due to potential pandemic-related delays – “day for day” commercial operation date extensions have been pursued, creating flexibility in achieving commercial operation date targets based on the duration of shelter-in-place directives. From the City’s perspective, which is informed by guidance provided via CalChoice, buyers must be diligent in contracting efforts to strike an appropriate balance between flexibility and certainty – not all project development delays are expected to be directly attributable to the pandemic, so effectively parsing contractual accommodations (for development delays) in consideration of this reality should serve to manage uncertainties related to project completion and renewable delivery timelines.

The City also encourages the Commission to coordinate closely with the Legislature to evaluate potential adaptations to the RPS Program, which may become necessary if renewable energy markets are materially impacted by the pandemic. With rapidly changing circumstances and related information, the City anticipates the need for considerable flexibility/agility in working to meet requisite renewable energy procurement mandates. In the meantime, the City will remain hopeful that impacts to renewable energy markets will not compromise California's ability to reach its renewable energy procurement goals or its own, internally established renewable procurement targets.

## **VII. Risk Assessment**

The City will make reasonable efforts to minimize the risk of renewable procurement shortfalls for purposes of complying with applicable RPS mandates established in SB 100, but it cannot definitively predict the scope or magnitude of circumstances that may impact annual retail energy sales, renewable energy markets or individual project performance. With this in mind, the City will responsibly assess RPS compliance risk by considering three key planning elements: 1) retail sales variability; 2) renewable energy production/delivery variability; and 3) impacts to overall system reliability associated with the City's planned RPS purchases and other influences. These topics will be generally considered in the noted sequence with observed risks informing potential adaptations to the City's planning process, potential adaptations to planning reserves and, ultimately, refinements to the City's renewable energy procurement (or sales) processes and quantities. As described elsewhere in this RPS Procurement Plan and in consideration of City-adopted RPS planning targets, the City expects to be well-positioned to meet its RPS compliance requirements in Compliance Period 4 (and beyond). Therefore, the City's self-determined risk of non-compliance is low. Nevertheless, the City will continue to

assess demand-side and supply-side risks to better understand potential areas of concern and to promote achievement of organizational compliance objectives.

Regarding demand-side risk, the City continues to evaluate and update prospective retail sales related to its upcoming customer enrollment process and the trailing 10-year planning period, including but not limited to anticipated changes related to customer eligibility, new development projects (that could increase retail energy consumption) and business closures, expected customer attrition (or growth) and changes to behind-the-meter generating capacity. From a practical perspective, the greatest demand-side risk with regard to the City's anticipated customer base is that retail sales are meaningfully higher than anticipated during Compliance Period 4. As the Commission is aware, CCAs provide an opportunity for customer choice, allowing customers to voluntarily participate in the City's program or remain bundled customers of the incumbent utility, SCE. To the extent that customers choose to leave the City's CCA program, or "opt out", the City's retail sales will decrease, resulting in related increases to the ratio of renewable energy serving such customers (and improving the City's position relative to applicable RPS compliance mandates) – it is unlikely that the City's renewable supply commitments will provide volumetric flexibility/options in the event of higher-than-anticipated retail sales volumes; in such instances, the City would need to pursue additional procurement opportunities to address unanticipated open positions. Because the City's anticipated participation rates are based on the well-documented experiences of California's other operational CCA programs, the organization is confident that actual retail sales will be reasonably well aligned with related forecasts. To the extent that participation in the City's opt-down (50% renewable) voluntary service option is higher than anticipated, the City would be expected to have additional RPS length (and could need to dispose of such length via surplus

renewable energy sales, if the City deemed such an approach necessary to avoid higher-than-necessary RPS procurement).

Considering the City's ongoing coordination with its planning departments, the City expects to be well informed regarding upcoming development projects or other customer changes that could materially increase retail sales. For this reason, the City believes that demand-side RPS compliance risk is low.

Regarding supply-side risks, the City is aware of the generation variability/intermittency associated with certain renewable technologies as well as the possibility of curtailment (based on pricing considerations or market directives) during certain times of day/year. In the case of new-build renewable projects, the City is also aware of the possibility of project delays and, potentially, project failure. Such circumstances can materially diminish renewable energy deliveries, jeopardizing the achievement of RPS compliance and exposing the CCA program to unexpected financial consequences, if such circumstances impact larger (or multiple) supply sources. Based on the City's 75% renewable default service offering and a diversified procurement approach that is expected to utilize numerous sources of RPS supply, it is unlikely that one or more project delays or failures would jeopardize achievement of RPS compliance.

CCAs are exposed to considerable compliance risk at the time of, and in the few years immediately following, program launch, as load variability is generally highest during this period of time and organizational creditworthiness is generally weakest (due to the considerable costs associated with CCA implementation, the timing related to program expenditures and revenue receipts, and the methodical pace at which financial reserves are typically accrued during early-stage operations). To the best of the City's knowledge, few early-stage CCAs have experienced difficulties with generalized renewable energy procurement, but long-term RPS contracting has

been more challenging – typical lead times (between contract execution and project completion) associated with new-build renewable energy projects are often 2-3 years or longer, and related power supply contracting efforts are rarely initiated so far in advance of service commencement. With this observation in mind, early-stage CCAs must either: 1) focus RPS contracting efforts on existing renewable generating resources; or 2) accept failure/delay risks associated with new-build renewable projects placed under contract near the time of CCA launch by incorporating reasonable planning reserves to mitigate such risks. In the case of the City, a balanced approach has been pursued, which will focus on contracting efforts with both new and existing renewable generating resources, thereby minimizing, but not eliminating, risks associated with compliance shortfalls. The City’s anticipated long-term contracting surplus during Compliance Period 4 should further mitigate concerns related to project development delays and or failures, as such planning reserve is expected to accommodate one or more project failures amongst the City’s upcoming contracting opportunities.

The City also anticipates mitigating supply-side risk by incorporating fixed-volume and index-plus pricing structures amongst its portfolio of RPS supply agreements. These procurement mechanisms serve to mitigate the risk of delivery variability (typically associated with intermittent renewable resources and/or renewable resources that may be subject to periodic curtailment) and exposure to negative market pricing (which could prompt economic curtailment). Fixed volume arrangements, in particular, also mitigate risk associated with commercial operation delays and facility failure; these structures also provide buyers with financial protections (via penalty payments) for under-delivery (which could be used, as a last resort, to offset compliance penalties in the event that the supplier or the City are unable to identify replacement volumes).

As part of the City's approach to managing supply-side risk (which will be carried out through its relationship with CalChoice), it has also adopted what it believes to be a CCA best practice related to RPS contracting: structuring early-stage solicitations to identify proven renewable generating technologies in prime resource locations to be developed and/or operated by the most experienced available suppliers (with strong, well-documented track records of successful project completion and operational reliability). Unlike certain of the IOU's early-stage contracting efforts, which focused on experimental/unproven renewable generating technologies, CCAs have generally focused early-stage contracting efforts on tried-and-true technologies and highly experienced counterparties – the City intends to follow this practice as well. This noted, there is always a possibility that future renewable energy supply will not be delivered as required, which is why the City intends to evaluate the sufficiency of currently anticipated renewable energy procurement targets in meeting both statutory mandates and prudent planning reserve levels – as previously noted, the City has both a minimum margin of procurement and a voluntary margin of procurement due to the 75% renewable energy default retail service option. It is expected that these two procurement margins substantially eliminate compliance-related concerns, as the level of renewable energy to be procured by the City (exclusively purchased from bundled renewable energy sources) will significantly exceed statewide procurement mandates.

The City has compiled information about curtailments of renewable energy in CAISO over the last four years. This information is presented below. The data shows that renewable curtailment has been consistently under 1% of load. The City also analyzed the occurrence of negative prices within the SP-15 area of the CAISO. These studies, combined with the analysis of other risk discussed below, indicate that the 2% minimum margin of procurement, equivalent



to 1.5% of load, adopted by the City should be sufficient. These past results are obviously not indicative of what might occur in the future, and indeed the data shows that the trend of renewable curtailment has generally been increasing. However, the City has considered recent and expected developments in energy markets and believes that increases in curtailments and negative prices should not continue growing as seen in the last few years. There are several reasons for this. First, the amount of storage available on the CAISO system, much of it tied directly to renewable resources, has grown dramatically over the last year and is expected to continue this explosive growth over the next few years. The growth of storage should provide a sink for large amounts of renewable energy that might today be curtailed, especially since much of the storage is co-located with the renewable energy. Exports of energy from the CAISO during periods of low prices when renewable curtailment would likely occur have also been increasing as the rest of the west begins to recognize the benefits to using this cheap energy from California when it is available. In addition to storage and exports, expected increases in transportation and building electrification will likely increase demand and also provide a sink for the rapidly increasing amounts of renewable energy. The changes brought about by climate change may also reduce the curtailment of renewable resources. This can be seen in the reduction in curtailments that occurred in 2021 which was at least partially due to the reduction in hydro generation due to the ongoing drought. As temperatures in California increase it is expected that annual snowpacks will decrease reducing the amounts of hydro generation. Additionally, climate change is expected to increase the volatility of weather, likely leading to more years with low hydro generation in the future.

The City has recently attempted to quantify the energy impacts of such supply side losses into three main categories: 1) curtailment risk; 2) counterparty risk; and 3) project cancellation

risk. These risks, as previously discussed, pose the greatest impacts to the delivery of RPS energy. In addition to the historical curtailment analyses already discussed (and further elaborated on below), the City has examined forwarding looking data concerning curtailment risk as the likelihood the market forward curves are below -\$15/MWh on an annual basis from the year 2022 to the end of the contract's life. Below this dollar amount, the City is likely better off financially curtailing the unit and purchasing additional renewable energy credits on the secondary market. The figures presented in the column quantifying curtailment risk are calculated by taking the energy delivered to market and multiplying it by the likelihood of curtailment. Counterparty risk is the risk posed by a counterparty being unable or unwilling to honor their total RPS delivery obligations, as reflected in related contract documents. The City quantifies this likelihood by considering S&P Global's, Global Corporate Annual Default Rates by Rating Category (%) as a measure of organizational viability and financial stability. While this rate considers industries beyond the energy sector, it provides solid insights into the correlation and potential impacts of dealing with uncreditworthy counterparties. The likelihood of default by credit rating was averaged over the years from 2014 to 2019. These years were chosen to remove irregularities in default rates during the COVID-19 pandemic. If a counterparty was found to be unrated, then the contract was reviewed to identify specified credit assurances; based on such assurances, an approximate rating was derived based on experience and risk tolerance. The final category reflected in the City's analysis is project/contract cancellation risk. This category is distinct from the counterparty risk category because the risk of project/contract cancellation may only affect a single project under a counterparty's portfolio. Projects may be cancelled for a variety of reasons, but in today's market economy, deals struck several months to a year ago may no longer be economic for the seller. It was assumed this risk only effects single

source projects, which have yet to be constructed. These projects were chosen because they have a single point of failure unlike RPS energy purchased from a pool of resources (under a portfolio-style purchase agreement in which there is generally more diversity amongst the sources of supply). Based on discussions with various counterparties and its industry knowledge, the City will assume this risk effects 1 in 20 deals. Considering these categories holistically, the City is able to derive a cumulative energy percentage at risk. To add to the City's conservative tolerance for risk, a top-level risk of non-delivery offset at 0.25% of renewable energy procurements will be added to the calculated energy at risk percentage. This adder will help to express risks the City cannot foresee and help to better guarantee full compliance through the assumption of lower than expected RPS deliveries (which will necessitate higher levels of RPS procurement, via renewable energy planning reserves). The percentage of renewable energy and error is the percentage of total renewable energy procured, while the percentage of retail load is the energy at risk as a percentage of retail load. These "at risk" percentages reflect possible losses which, through no fault of the City, may occur by virtue of being a market participant. These losses pose a risk for non-compliance relative to the City's RPS goals and targets. Since this number is not a guaranteed loss, the City will implement the previously mentioned mitigation strategies to give the greatest chance of full market delivery and compliance.

ID	Contract	RPS Contract ID	Energy	Delivery & Market Risks		
			Energy to be Delivered to Market (MWh)	Curtailment Risk (MWh)	Counterparty Risk (MWh)	Project Cancellation Risk (MWh)
1	Contract 3038	0	500,000	-	-	-
2	Contract 3510	0	125,000	-	2,403	-
3	Contract 3755	0	831,516	-	15,982	-
4	Contract 3763	0	294,834	-	5,667	-
<b>Total</b>			<b>1,751,350</b>	<b>-</b>	<b>24,051</b>	<b>-</b>

#### Energy

<b>Total Renewable Energy</b>	<b>1,751,350</b>
<b>Total Renewable Energy at Risk</b>	<b>24,051</b>
<b>Pct of Renewable Energy at Risk</b>	<b>1.37%</b>
<b>Pct of Unknown Error at Risk</b>	<b>0.25%</b>
<b>Pct of Renewable Energy &amp; Error at Risk</b>	<b>1.62%</b>
<b>Pct of Retail Load</b>	<b>0.71%</b>

As previously mentioned, the City has also analyzed historical data on curtailments in the CAISO energy markets.

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above as to why curtailments are not expected to increase as they have over the past few years also informs expectations of negative prices. As explained elsewhere in this document, the City will take steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources.

Annual Curtailments (MWh)			
		Wind	Solar
2018		28,686	432,357
2019		43,557	921,684

2020		90,276	1,497,220
2021		78,477	1,426,326
<b>Annual Curtailment (% of specific generation)</b>			
2018		0.17%	1.56%
2019		0.27%	3.22%
2020		0.56%	4.99%
2021		0.41%	4.19%
<b>Annual Curtailment (% of Load)</b>			
2018		0.013%	0.191%
2019		0.020%	0.420%
2020		0.041%	0.683%
2021		0.036%	0.647%

The City has also analyzed negative prices in the CAISO, as these can greatly affect the siting and operation of CCA owned and contracted assets. The City has endeavored to quantify the occurrence of such events to help limit their financial and regulatory impact. With limited means of forecasting such events, the City has assembled this additional historic analysis with the average results being used in the City's forecasting assumptions for curtailment events.

Below are several charts which illustrate the number of historic curtailment events. The City defines a curtailment event as the times the location marginal price (LMP) drops below negative \$15/MWh. It is assumed below this price it is financially prudent to curtail a renewable generators energy production and procure renewable energy credits (RECs) on the secondary market. Estimates for the real-time market (RTM) have been averaged over the hour, so only the average price is evaluated.

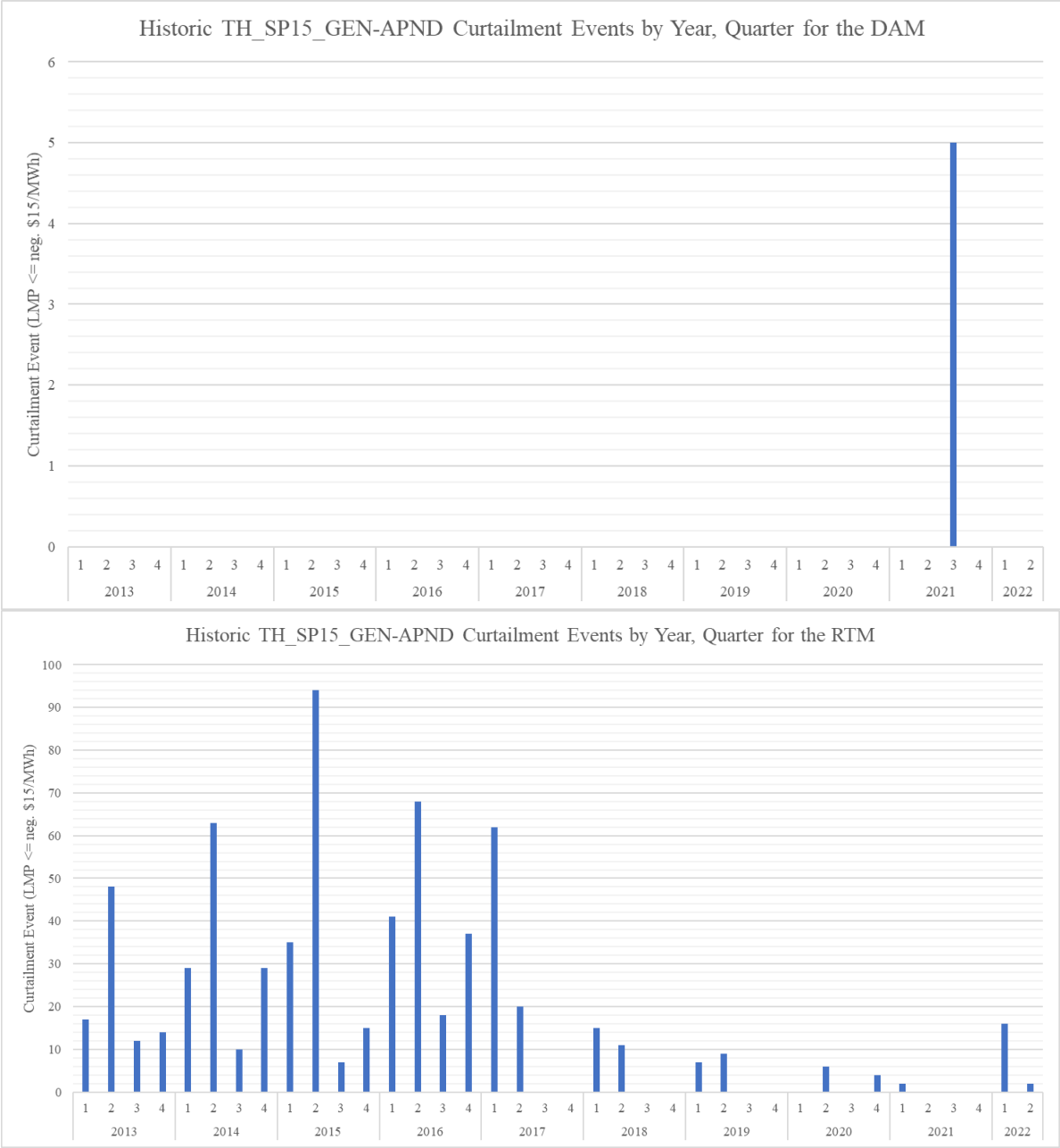


Table: SP15 DAM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2				
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0			
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0			
Total Quarter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0				
Total Year	0				0				0				0				0				0				0				0				5				0	

Table: SP15 RTM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	0	1	0	0	1	0	0	4	1	2	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	4	1	1	1	2	1	3	3	1	0	0	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	9	4	3	3	7	0	3	4	3	0	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	5	2	0	7	9	2	3	2	6	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2	7	1	1	1	4	1	2	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	4	3	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2	2	1	0	0	4	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	1	0	0	0	2	2	0	0	0	3	1	0	0	3	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2	5	0	1	0	5	1	0	4	12	1	1	3	5	4	2	5	4	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
10	0	6	1	2	3	7	1	1	2	8	3	3	2	9	5	6	10	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11	2	1	1	2	4	8	1	3	3	5	1	1	3	11	4	5	7	1	0	0	1	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0
12	1	0	0	1	2	3	0	4	2	6	0	2	4	3	2	10	5	2	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	1	1
13	0	1	0	1	2	1	0	2	2	4	0	2	4	3	1	3	2	1	0	0	1	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0	3	0
14	1	0	0	1	2	1	0	0	2	6	0	1	4	6	1	6	5	2	0	0	2	0	0	0	4	1	0	0	0	1	0	1	1	0	0	0	3	1
15	1	2	0	1	1	3	0	1	2	6	0	2	5	7	1	4	7	2	0	0	3	1	0	0	1	2	0	0	0	1	0	0	1	0	0	0	3	0
16	0	0	0	0	1	3	0	1	4	7	0	1	5	7	0	1	8	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	
17	0	0	0	0	1	2	0	0	1	9	0	0	4	3	0	0	2	2	0	0	4	1	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	
18	0	0	0	0	0	1	0	0	0	7	0	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
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20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	0	1	0	0	0	0	0	0	1	3	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Quarter	17	48	12	14	29	63	10	29	35	94	7	15	41	68	18	37	62	20	0	0	15	11	0	0	7	9	0	0	0	6	0	4	2	0	0	0	16	2
Total Year	91				131				151				164				82				26				16				10				2				18	

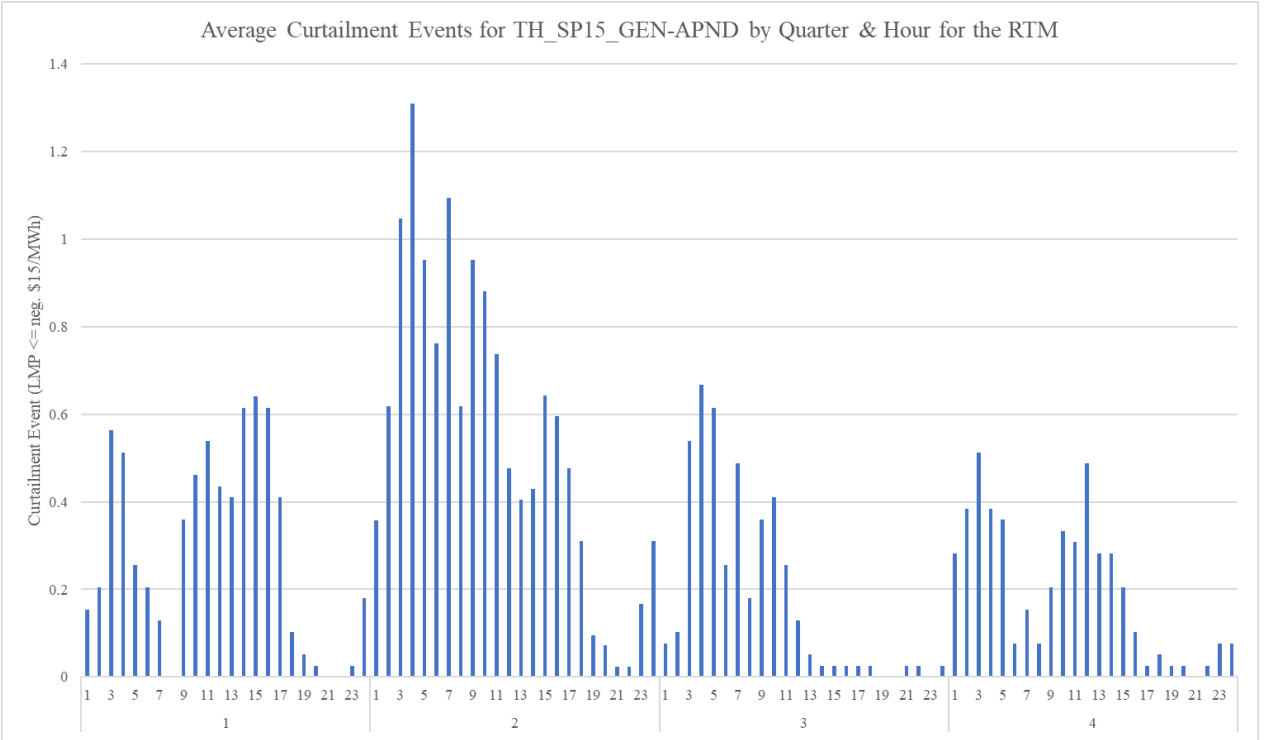
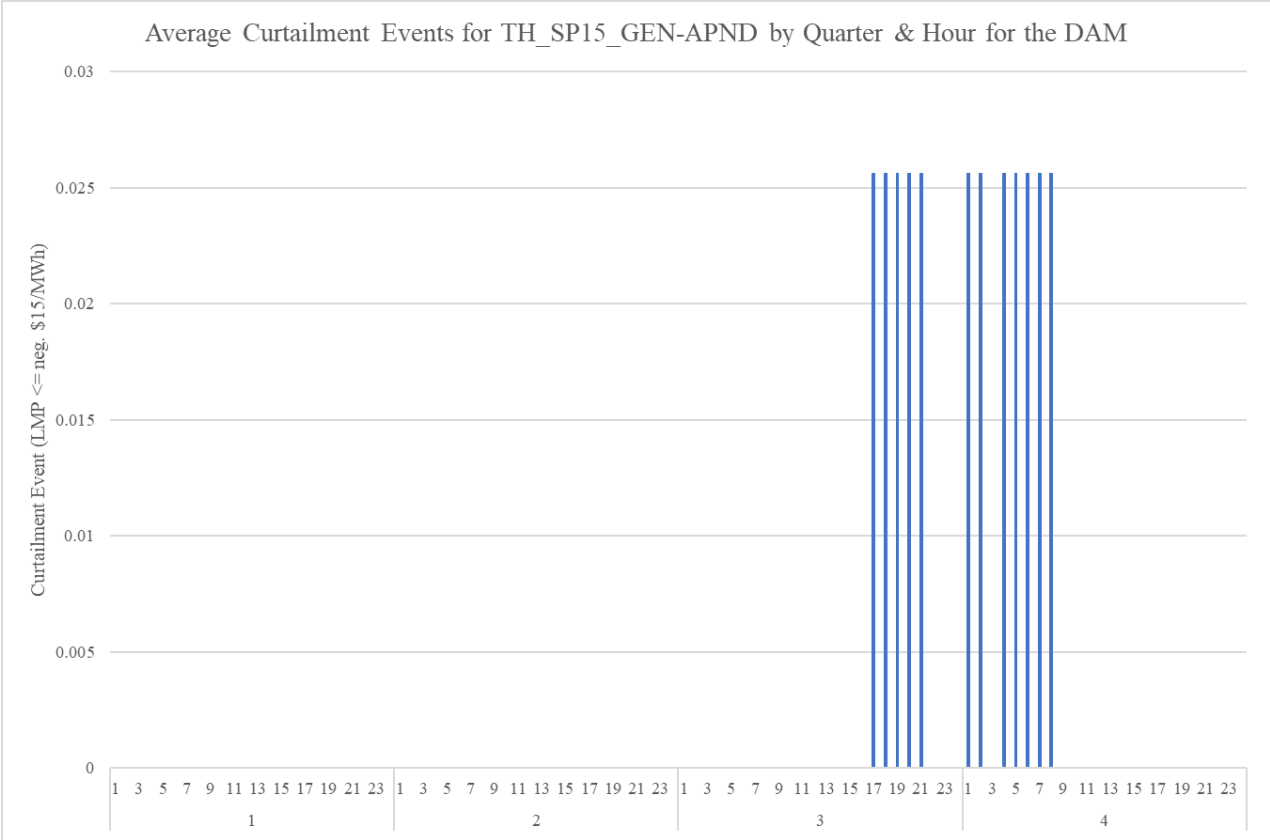




Table: TH\_SP15\_GEN-APND Average DAM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.00	0.00	0.00	0.03
2	0.00	0.00	0.00	0.03
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.03
5	0.00	0.00	0.00	0.03
6	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.03
8	0.00	0.00	0.00	0.03
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.03	0.00
18	0.00	0.00	0.03	0.00
19	0.00	0.00	0.03	0.00
20	0.00	0.00	0.03	0.00
21	0.00	0.00	0.03	0.00
22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00
<b>Total Quarter</b>	0.00	0.00	0.01	0.01
<b>Total Year</b>	0.01			

Table: TH\_SP15\_GEN-APND Average RTM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.15	0.36	0.08	0.28
2	0.21	0.62	0.10	0.38
3	0.56	1.05	0.54	0.51
4	0.51	1.31	0.67	0.38
5	0.26	0.95	0.62	0.36
6	0.21	0.76	0.26	0.08
7	0.13	1.10	0.49	0.15
8	0.00	0.62	0.18	0.08
9	0.36	0.95	0.36	0.21
10	0.46	0.88	0.41	0.33
11	0.54	0.74	0.26	0.31
12	0.44	0.48	0.13	0.49
13	0.41	0.40	0.05	0.28
14	0.62	0.43	0.03	0.28
15	0.64	0.64	0.03	0.21
16	0.62	0.60	0.03	0.10
17	0.41	0.48	0.03	0.03
18	0.10	0.31	0.03	0.05
19	0.05	0.10	0.00	0.03
20	0.03	0.07	0.00	0.03
21	0.00	0.02	0.03	0.00
22	0.00	0.02	0.03	0.03
23	0.03	0.17	0.00	0.08
24	0.18	0.31	0.03	0.08
<b>Total Quarter</b>	0.29	0.56	0.18	0.20
<b>Total Year</b>	1.22			

After examining the historical CAISO curtailment data, its risk analysis, and the analysis of negative pricing and curtailments, the City remains confident that the 2% minimum margin of procurement that it has institute provides the correct balance between risk management and excessive costs. The Town will continue to monitor trends in the energy market, especially the curtailment levels of renewable resources, and if necessary will adjust the minimum margin of procurement. Furthermore, The City has minimal exposure to delivery shortfalls related to project failure or delays due to the fact that all of its currently contracted projects are already online.

Following contract execution, the City staff will closely coordinate with its suppliers,

particularly developers of any new-build resource, to maintain an acute awareness of project development progress, including any anticipated issues that could delay expected initial deliveries or compromise overall project viability. Such communications are intended to provide the City with an early indication of such issues, which would allow “corrective procurement actions” to occur if the extent of such issues were determined to impact the City’s RPS compliance status.

In terms of system and resource reliability, the City will utilize a procurement approach that intends to emphasize resource and contractual diversity. This process is expected to contribute to the identification of renewable generating resources that should positively impact system reliability over time.

While other CCA programs may choose to pursue differing minimum margins of procurement, the City observes that there does not seem to be a clear standard or related guidelines for setting such metrics. As such, the City has considered core objectives of its CCA program when tentatively establishing this metric, including compliance with pertinent regulatory mandates, specifically California’s RPS Program. When considering the perceived sufficiency of the City’s current minimum margin of procurement, it is also important to acknowledge the potential impacts on future retail sales imposed by the pandemic. Based on information provided by CalChoice and other CCA programs throughout the state, the City understands that there have been significant load reductions caused by current economic conditions. For renewable energy planning purposes, the City has yet to adapt its retail sales forecast to reflect such changes. Recent significant increases in inflation, and increases in interest rates to combat such inflation, are expected to slow the growth of the economy over the next few years. To the extent that that occurs and retail sales fall below expectations during CCA launch and early-stage operations, the City is expected to accrue actual

renewable energy volumes in excess of its planning targets (including reserves) and may have a margin of over-procurement that is higher than previously noted. Electric load within the City will be monitored during the period leading up to its launch to determine if related planning and procurement adjustments may be needed to protect the City from higher-than-anticipated renewable energy costs and related impacts to customer rates.

Santa Barbara is aware that Section 399.13(a)(6)(A), and the ACR, note that generation variability and resource availability may impact the amount of future electricity delivered. As previously discussed, Santa Barbara considers this potential risk during its resource planning process and related procurement/contracting efforts. The City may pursue contract structures that promote volumetric stability through the application of firm delivery quantities and/or performance guarantees that provide financial remedies/penalties in the event of delivery shortfalls. If necessary, the application of such penalties could be used to: 1) as a first priority, procure additional renewable energy supply to address delivery shortfalls; or 2) in the event of a determination of non-compliance, offset the cost of related penalties. The City's intent is to achieve and maintain compliance with applicable RPS mandates, and the latter option is a last resort that is not expected to apply.

Furthermore, the City is aware of the need to perform a risk assessment in this RPS Procurement Plan and, as previously described, presents the results of such an initial assessment. At this time, and as previously noted, the City observes a risk management/assessment process that focuses on the identification and selection of highly experienced, financially viable renewable energy sellers, a process which is believed to materially reduce the risk of delivery shortfalls (and potential compliance deficits). The City will explore the use of quantitative tools to further understand these risks, as evidenced by the risk assessment included above.

As previously noted, the City's voluntary margin of procurement, based on the default 75% renewable service option, will serve as a significant risk mitigation mechanism in meeting pertinent RPS procurement mandates but will still be monitored, and potentially adjusted, along with the 2% minimum margin of procurement, over time to ensure that the City meets or exceeds applicable renewable energy procurement mandates during each compliance period. To the extent that such margin of over procurement is determined to be insufficient on a projected basis (in consideration of anticipated renewable energy delivery shortfalls, project completion delays or other considerations), the City may increase planned levels of renewable energy procurement to promote the creation of larger planning reserves – this exercise will be incorporated in the City's general resource planning process, which will assess anticipated resource needs over the near-, mid- and long-term planning horizons. The City has heightened its focus on the risk assessment process as it began its initial renewable energy solicitation in early 2021. To the extent that understanding the supplier responses to such solicitation necessitates the use of a quantitative tool, the City will act accordingly. However, if the City believes that its supplier selection process results in the identification of: (1) low-risk supply sources that are already operational; or (2) highly experienced, financially viable project developers that have consistently demonstrated a successful development track record over time, then it may choose to forgo certain elements of a quantitative assessment, which may not be necessary to understand prospective compliance risks.

Because of its relatively small size, it is likely that the City will engage in a relatively small number of long-term renewable energy supply agreements, so a meaningful delivery shortfall (relative to expectations) or project development failure amongst such contracts could seemingly result in compliance-related deficiencies for the City (related to its long-term

contracting obligation). Similar issues do not seem relevant with regard to short-term renewable energy purchases, as the market continues to remain robust for CCA buyers. This noted, it is entirely unreasonable for the City to engage in significant levels of over-procurement via long-term contract, as such an approach would materially limit planning flexibility, may impose excessive costs and rate-related impacts on its CCA customers, and would seemingly expose the City to unnecessary market risks (by virtue of the fact that the timing of its planned service commencement will necessitate the execution of all long-term supply commitments required to support early-stage operations at a single point in time – such an approach is generally not advisable, particularly with uncertain retail sales expectations that relate to the pandemic). As previously noted, the City believes that a keen focus on identifying highly experienced, financially viable long-term renewable energy suppliers is the best risk mitigation strategy for this important element of the RPS Program, and the City intends to observe this practice during its upcoming solicitation process(es).

With respect to system reliability, the City is aware of the planning challenges faced by retail sellers with internally adopted renewable energy targets that exceed RPS mandates. In particular, such retail sellers must often bear increased costs for renewable resources with diverse and complementary delivery profiles as well as comparatively high levels of energy storage infrastructure (to allow for the reshaping of renewable energy deliveries to better align with load). For example, renewable energy procurement efforts that may initially focus on relatively low-cost solar resources will often necessitate subsequent investments in co-located energy storage infrastructure and/or higher-cost baseload renewable generating technologies, such as those using geothermal, biomass and landfill gas fuel sources. These baseload renewable technologies are often priced at three-to-four times the level of in-state photovoltaic

solar generation but generally provide increased capacity value (due to the more predictable, baseload generating profiles of such resources) and related reliability enhancements. By ensuring a better match of energy and load, as well as procuring resources more capable of providing ancillary services than intermittent renewable resources alone, the City seeks to mitigate potential negative system impacts such as rolling outages or violations of current standards for ancillary services. Certain of the resources that may be procured to satisfy recent capacity mandates are also expected to support grid reliability and may include baseload renewable energy resources, renewable energy plus storage configurations or stand-alone battery storage configurations, all of which would be expected to improve grid reliability by some measure. Over time, the City will balance the often competing interests of cost and reliability to support reasonably close alignment between supply and demand (reducing the need for pronounced resource ramping on the system), cost-effective procurement and overall grid reliability. The City is aware that low-cost, long-term solutions are incredibly challenging to identify but will remain committed to pursuing a conscientious planning process that balances grid reliability, compliance demonstration, and customer cost impacts.

In terms of lessons learned related to risk management, the City observes that internally adopted, minimum margin of procurement and voluntary margin of procurement generally serve as effective mitigation measures related to RPS compliance. While this approach is not a viable or desirable option for all retail sellers, the City believes that its adopted planning targets will virtually eliminate the risk of RPS compliance shortfalls. This perspective seems to be supported by the experiences of other CCAs, such as MCE, which have also adopted above-RPS planning targets and have experienced ongoing success in meeting RPS mandates.

The City has also observed the value of resource diversity across a broad spectrum of considerations, including resource location, generating technology, suppliers/developers and contract structures, amongst other concerns. Long-term renewable supply commitments are inherently risky in the sense that such commitments expose the buyer and/or seller to a variety of unknown circumstances, including but not limited to evolving market prices and policy changes. Throughout a long-term contract relationship, it seems evident that areas with initially low levels of negative pricing (and related curtailment of energy production) can materially change as new project development activity occurs, creating (or exacerbating) conditions of over-supply and related incidents of energy curtailment. This risk is particularly challenging to manage, as California's escalating RPS procurement mandates necessitate ongoing investment in new renewable generating infrastructure, which is often sited in resource-rich areas that become oversaturated with similar generating technologies (and related delivery profiles). These circumstances seem inevitable and, over the course of a long-term supply relationship, may expose the contracted parties to unexpected risks, including negative prices (and related budgetary impacts) and curtailed deliveries (which may compromise the fulfillment of mandated procurement targets by the buyer). As previously discussed, the City's minimum margin of procurement of 2%, or 1.5% or retail load, is higher than the curtailments over the last four years for renewable resources in the CAISO areas.

In terms of the City's upcoming contracting processes, it is becoming aware that risk can also be diversified through various contract structures. For example, an "index-plus" pricing structure is useful in transferring nodal/market price risk to the seller – in such structures, the buyer pays a fixed renewable premium, while the seller assumes risk associated with market price fluctuations but also receives market revenues (which could be higher or lower than

anticipated) – even though the buyer receives the energy, renewable attribute and (in certain instances) capacity value as part of such a transaction, the buyer’s financial risk is generally limited to the payment of the renewable premium. For buyers who are averse to market price risk, the index-plus pricing structure effectively eliminates this concern but may result in higher overall contract costs (which may be acceptable, as a form of insurance, to mitigate market price exposure). In other structures, such as the “fixed-price” or “aggregate pricing” structure, the renewable energy premium and energy commodity (and oftentimes, capacity value) are reflected in a single price paid by the buyer – this structure deliberately allocates market price risk to the buyer, but the buyer may also pay a lower imputed renewable premium in instances where market revenues (realized when the energy commodity is delivered to the grid) closely approximate (or exceed) the aggregate renewable energy price. In evaluating potential contract structures, decisions can be made in consideration of risk allocation preferences, and the City intends to pursue contracting structures that balance such risks over time. Initially, the City may pursue a disproportionate share of contracts that allocate market price risk to its renewable energy sellers – this may be more desirable before the City accrues meaningful financial reserves and attempts to promote budgetary certainty during early-stage program operations. Over time, however, the City expects to increasingly use aggregate pricing structures that could lower overall procurement costs but may expose the CCA program to increased market risk. Again, the City is still developing its understanding of applicable risks and related mitigation measures and will keep the Commission apprised of such information in future RPS Procurement Plans.

### **VIII. Renewable Net Short Calculation**

Santa Barbara has provided a quantitative assessment to support the qualitative descriptions provided in this RPS Procurement Plan, which is attached as Appendix C. At this



point in time and based on the City’s anticipated renewable energy contracting outcomes (which will not be completed until later this year), there have been no risk-related adjustments to the expected renewable energy quantities reflected in Appendix C. If such adjustments are deemed necessary or appropriate in the future, the City will reflect such adjustments in a future planning document.

## **IX. Minimum Margin of Procurement (MMoP)**

The City, as shown in the table below, intends to build an electricity supply portfolio with short-term and long-term contracts that achieve state and City Council-approved requirements related to RPS-eligible renewable energy and GHG-free energy. The following table displays the City’s intended margin of RPS over-procurement based on the differential between the SB 100 procurement targets and the City’s internally adopted RPS procurement targets.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
<b>SBCE's Voluntary Margin of Procurement (% of Retail Sales)</b>	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%	15.0%	15.0%

The City’s currently applicable, internally adopted renewable energy procurement targets significantly exceed statewide mandates over the noted 10-year planning horizon and reflected a City-approved 75% renewable default retail service offering. Percentages reflected in the previous table include the composite effects of expected customer service elections – such percentages are reflected in the line item labeled “SBCE’s Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)” serve as SBCE’s Voluntary Margin of Procurement (“VMoP”). Following its October 2021 launch, the City will periodically review its progress in achieving the noted targets, including actual participation rates in the default and voluntary retail service offerings, which could change the voluntary margin of procurement.

To address RPS compliance risk, SBCE uses its risk assessments, including its renewable net short calculations, to establish a Minimum Margin of Procurement to guide RPS compliance procurement planning. SBCE calculated the minimum margin of procurement, or MMoP, using a 2% risk adjustment (or planning reserve) that was applied to SBCE's minimum internally adopted RPS procurement target (see row 2 in the previous table), which is reflective of the renewable content offered through SBCE's default retail service offering. Based on the manner in which SBCE has established its MMoP, as a 2% planning risk adjustment relative to total default renewable energy requirements, the effective MMoP percentages observed by SBCE range from 2.5% (2030) to 4.2% (2021), relative to SBCE's projected RPS compliance need, over the ten-year planning horizon. The following chart provides additional detail regarding the effective MMoP percentages observed by SBCE.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
<b>SBCE's RPS Planning Risk Adjustment (at 2% of Minimum Internally Adopted RPS Target)</b>	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>SBCE's Minimum Margin of Procurement (% of Retail Sales)</b>	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
<b>SBCE's Minimum Margin of Procurement (% buffer relative to RPS Mandate)</b>	4.2%	3.9%	3.6%	3.4%	3.2%	3.0%	2.9%	2.7%	2.6%	2.5%	2.5%	2.5%

SBCE's MMoP is intended to address potential delivery variability for intermittent resources, curtailment risk, project delays and other operational peculiarities that may cause actual renewable energy deliveries to deviate from projections. Note that certain of SBCE's renewable energy deliveries are not subject to variability – such agreements reflect minimum fixed delivery quantities (or quantities with limited volumetric variability) with corresponding financial penalties (paid to SBCE by related sellers in the event of delivery shortfalls). SBCE also observes that in 2021, the entirety of its renewable energy deliveries were secured via

contracts with specified minimum delivery quantities that were established to ensure that SBCE fulfilled its intended minimum renewable content.

If SBCE adopts changes to its future renewable energy content/offerings, future RPS procurement planning documents will be updated accordingly. The City assumes that future renewable procurement targets (inclusive of planning reserves necessary to meet RPS mandates) will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size (capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates.

#### **IX.A. MMoP Methodology and Inputs**

The City's MMoP is intended to address an RPS failure rate at or above that which is reflected in the renewable net short reporting template. In the event of contract under-deliveries, commercial operation delays and/or project failures, the MMoP should be sufficient to ensure SBCE meets its VMoP and is compliant with the RPS procurement requirements. As shown in Section VII above, the City's MMoP of 2% exceeds the historical level of curtailments in the CAISO grid (shown as under 0.1% for wind and under 0.7% for solar), and also exceeds the City's risk assessment of RPS contracts (shown as 0.62% of retail load). SBCE's VMoP is the annual RPS-eligible minimum portfolio content identified in SBCE's internally adopted planning targets.

As discussed in Section VIII, SBCE has incorporated risk adjustments to renewable energy delivery estimates associated with existing generating facilities and resources that are under development. Achieving SBCE's MMoP necessitates higher levels of renewable energy

procurement (1.5% of retail sales, or 2.5% - 4.2% of SBCE's RPS compliance needs throughout the ten-year planning period), which accommodate the potential for delivery shortfalls (due to a variety of circumstances) while still allowing SBCE to meet prescribed RPS mandates. Considered in concert, SBCE's VMoP and MMoP provide a substantial aggregate renewable energy planning buffer, relative to applicable compliance mandates, as reflected in the following table.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
<b>SBCE's Voluntary Margin of Procurement (% of Retail Sales)</b>	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%	15.0%	15.0%
<b>SBCE's Minimum Margin of Procurement (% of Retail Sales)</b>	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
<b>SBCE's Aggregate Margin of Over-Procurement (% of Retail Sales)</b>	40.8%	38.0%	35.3%	32.5%	29.8%	27.2%	24.5%	21.8%	19.2%	16.5%	16.5%	16.5%

Such excess procurement will occur based on Council-approved policy related to the level of renewable energy reflected in the City's default retail service offering as well as assumed participation in the City's voluntary "opt-down" energy service option. The City will effectively ensure its compliance with applicable RPS mandates by procuring in consideration of internal renewable energy goals that meaningfully exceed state-adopted requirements. The extent to which the City will exceed statewide RPS mandates will be dependent upon a variety of factors, including those previously noted and RPS product availability, product cost and budgetary impacts and timely product deliveries from generating facilities under contract with the City. If the City Council considers and adopts changes to its internal renewable energy procurement targets, the organization will accordingly update future RPS planning documents to reflect such changes. Staff assumes that the future levels of over-procurement will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size

(capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates.

### **IX.B. MMoP Scenarios**

The City plans to meet the annual program renewable goals reflected in the table presented in Section IX (above), including the MMoPs reflected therein. As reflected in this table, the City's anticipated MMoP percentage is 2% of its RPS target, or, equivalently, 1.5% of retail sales.

During its bid evaluation and supplier selection processes, the City considers a variety of risks and will explicitly incorporate such risks into its MMoP calculation after related contracting processes are complete and project development progress (for new-build renewable projects) is being tracked by CalChoice. Based on information gathered during its contract management process (which will focus on key milestone achievement and deviations from initial project development schedules for new-build projects), the City may adjust expected renewable energy deliveries. To the extent that adjusted future deliveries meaningfully differ from the City's previous expectations, additional RPS procurement may be pursued to ensure that the City maintains its desired MMoP and related minimum customer delivery commitments.

The City, via CalChoice, will also model demand-side sensitivities that may impact MMoP calculations. This will be particularly important during administration of the City's customer enrollment process, as participation rates are expected to be most volatile during this period of time. In addition to load variability resulting from customer participation levels, the City will also monitor electric vehicle penetration rates, net energy metering participation rates and other considerations that may impact overall customer energy requirements and related demand-based MMoP calculations.

## **X. Bid Solicitation Protocol**

### **X.A. Solicitation Protocols for Renewables Sales**

Santa Barbara does not have immediate plans to issue a solicitation for sales of renewable energy products/projects, as it has just commenced operations. If such a need arises in the future, however, the City will consider a protocol that: 1) ensures the City remains compliant with applicable RPS procurement mandates; 2) minimizes overall portfolio costs to the greatest extent practical; and 3) provides sufficient flexibility to accommodate reasonably anticipated supply-side and demand-side changes that could impact the City's overall renewable energy requirements.

### **X.B. Bid Selection Protocols**

Consistent with Section 399.13(a)(6)(C), Santa Barbara shall conduct solicitations for requisite energy resources, including specific needs for eligible renewable energy resources (reflecting locational preferences, when applicable, for such resources), generating capacity, and required online dates to assist in determining what resources fit best within its supply portfolio. Since CCA program governing boards are comprised of local elected officials, these solicitation and procurement decisions are overseen by elected representatives of the community and administered by CalChoice, as previously described. These solicitation and procurement decisions will seek to comply with locally-set targets and preferences. Santa Barbara began the process of developing a renewable energy solicitation in early 2021 and released such solicitation in Q2 2021 to address its future contracting needs. Any renewable energy supply agreements resulting from future participation in renewable energy procurement processes will be brought to the City's Governing Council for approval prior to execution. Through its relationship with CalChoice, the City has engaged in developing solicitation protocols for

requisite renewable energy supply and intends to incorporate a variety of considerations in related bid requirements. Pursuant to Public Utilities Code 399.13(a)(6)(C),<sup>2</sup> and the City's discussions with CalChoice, these considerations, which will be focused on solicitation protocols, bid evaluation and supplier selection, are expected to include:

1. Overall quality of response, inclusive of completeness, timeliness, and conformity;
2. Price and relative value within the City's supply portfolio;
3. Project location and local benefits;
4. Project development status, including but not limited to progress toward interconnection, deliverability, siting, zoning, permitting, and financing requirements;
5. Qualifications, experience, financial stability, and structure of the prospective project team (including its ownership);
6. Environmental impacts and related mitigation requirements, including impacts to air pollution within communities that have been disproportionately impacted by the existing generating fleet;
7. Potential impacts to grid reliability;
8. Potential economic benefits created within communities with high levels of poverty and unemployment;
9. Acceptance of the City's standard contract terms; and
10. Development milestone schedule, if applicable.

When evaluating future long-term renewable purchase opportunities, the City will also consider "the employment growth associated with the construction and operation of eligible renewable energy resources." More specifically, to the extent the City procures new RPS resources in solicitations where qualitative factors are considered, it will include a qualitative assessment of the extent to which proposed project development activities will support this goal. Such determinations will be based on information provided by the prospective supplier and the City's independent assessment of such information. When the City procures RPS resources, it

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<sup>2</sup> Cal. Pub. Util. Code § 399.13(a)(6)(C) ("Consistent with the goal of increasing California's reliance on eligible renewable energy resources, the renewable energy procurement plan shall include all of the following: A bid solicitation setting forth the need for eligible renewable energy resources of each deliverability characteristic, required online dates, and locational preferences, if any.").

will require bidders to submit information on projected California employment growth during construction and operation. This data will include the expected number of hires, duration of hire, and an indication of whether the bidder has entered into Project Labor Agreements or Maintenance Labor Agreements in California for the proposed project.

Pursuant to Public Utilities Code 399.13(a)(8)(A), the City will also consider the inclusion of evaluative preference for “renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”<sup>3</sup> To the extent that the City procures RPS resources through solicitations where qualitative factors are considered, impact on disadvantaged communities will be considered. Such information will be gathered by requiring prospective suppliers to answer the following questions: Is your facility located in a community afflicted with poverty or high unemployment or that suffers from high emission levels? If so, the participant will be encouraged to describe how its proposed facility can provide the following benefits to adjacent communities:

- Projected hires from adjacent community (number and type of jobs);
- Duration of work (during construction and operation phases);
- Projected direct and indirect economic benefits to the local economy (i.e., payroll, taxes, services);

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<sup>3</sup> Cal. Pub. Util. Code § 399.13(a)(8)(A) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).



- Emissions reduction – identify existing generation sources by fuel source within 6 miles of proposed facility and indicate whether the proposed facility will replace/supplant the identified generation sources; and
- To the extent that the proposed generating facility is expected to replace/supplant an existing generating facility, the prospective supplier will be asked to quantify the associated emission impacts of this transition.

These considerations, as well as various others, will be reflected in the City’s future solicitation materials and will help shape the criteria against which prospective responses will be evaluated. Based on the success of its initial solicitation(s), the City may adapt these considerations to improve success in future renewable energy procurement efforts. As the City has yet to prepare or release solicitation materials, it does not have related documentation to share at this point in time.

#### **X.C. LCBF Criteria**

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only directly applicable to IOUs and the Commission does not have jurisdiction over the solicitation protocols of CCAs. However, consistent with Section 399.13(a)(9),<sup>4</sup> Santa Barbara will consider best-fit attributes that support a balanced mix of resources to help support reliability of the electrical grid.

In particular, the City anticipates considering “least cost best fit” (“LCBF”) during the evaluation of responses to its renewable energy solicitation(s). From the City’s perspective, use

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<sup>4</sup> Cal. Pub. Util. Code § 399.13(a)(9) (“In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.”).

of the term “costs” should appropriately include considerations beyond the basic price of renewable energy. More specifically, costs should include a broad range of considerations, such as: (1) reputational damage resulting from failure to meet state-mandated and/or internally established renewable energy procurement targets; (2) compliance penalties resulting from failed project development efforts or delivery shortfalls; (3) administrative complexities related to dealing with inexperienced suppliers (such as prolonged contract negotiation processes and uncertainties related to project milestone timing and achievement); and (4) impacts to planning certainty resulting from higher risk projects. These factors, as well as various others, will be considered by the City as components of its cost evaluation processes, which may lead to the selection of offers that aren’t necessarily the lowest cost option(s), as expressed on a dollar-per-MWh basis. With regard to “fit”, this aspect of a prospective supply opportunity has as much to do with compatibility (between the City and its suppliers) and alignment with key local objectives as it does with balancing customer usage and expected project deliveries, particularly when considering long-term contracting opportunities that will necessitate a constructive working relationship over a period of ten years or more. The City also interprets the term “fit” to mean the general suitability of a project opportunity in promoting grid reliability – while the City has no explicit operational or maintenance responsibilities related to the local distribution system serving its customers or the bulk electric system at large, it is aware of the profound importance of supporting grid reliability through its procurement processes. With this in mind, the City will make best efforts to balance the demands of California’s rigorous RPS compliance mandates with its interest in promoting such reliability. This is no small task, and the City expects that considerations related to grid reliability will be incorporated at each stage of its planning and procurement processes but also acknowledges that the full scope of its RPS

contract/resource portfolio (including related impacts to grid reliability) will significantly evolve throughout the organization's operating history. Over time, the City expects to thoughtfully assemble a diversified portfolio of RPS contracts/resources that will not only contribute to the City's achievement of applicable compliance mandates but also to improved stability and reliability of California's electric system. As such, the City's LCBF methodology will consider a broad range of components, including those previously noted, balancing a variety of pertinent considerations at the time each renewable purchase opportunity is being evaluated.

Additionally, the requirement of Section 399.13(a)(9) to give preference to renewable projects located in certain communities is expressly only applicable to "electrical corporations" and is not mandatory for CCAs.<sup>5</sup> However, Santa Barbara recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment. Consistent with this recognition, Santa Barbara will consider the manner in which air pollution may be impacted during its renewable energy solicitation process(es) and related project selection.

## **XI. Safety Considerations**

Santa Barbara holds safety as a top priority. Since Santa Barbara does not own, operate, or control generation facilities, Santa Barbara's procurement of renewable resources will not present any unique safety risks. This Section describes how Santa Barbara has taken actions to reduce the safety risks that may be posed by its renewable resource portfolio and how Santa

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<sup>5</sup> Cal. Pub. Util. Code § 399.13(a)(9)(1) ("In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.").

Barbara supports the state's environmental, safety, and energy policy goals.

As the City pursues future renewable energy purchases, it will consider requiring verbiage addressing adherence (of the seller/project operator) to prudent electrical practices and applicable safety requirements, including compliance applicable laws and regulations relating to safety. During future contracting efforts, the City will perform a prudent assessment of the supplier's willingness to include such provisions as well as any related impacts to pricing/cost – the City is aware that requesting more stringent processes and/or requirements may trigger requested price increases by the seller/supplier. To the extent that product pricing would meaningfully increase due to the inclusion of such provisions, the City would need to evaluate budgetary impacts and other risks before proceeding. The City is hopeful that most suppliers will be agreeable to the inclusion of such provisions and will be diligent in requesting such language in its future contracts.

In addition, the City has provided additional information below on its existing safety practices.

#### **XI.1. Wildfire Risks and Vegetation Management**

In ongoing and future negotiations, the City will ensure that its contracts with renewable generating facilities will require the facility operator to comply with all relevant safety requirements. This will be accomplished, in part, through contract provisions that require the counter party to operate and maintain the facility in compliance with all relevant laws and prudent operating practices, including relevant safety and environmental protection standards.

At this point in time, the City has yet to adopt specific procurement policies or preferences focused on the acquisition of forest biomass resources. The City is aware of the mitigating impacts that biomass generators, which use forestry waste as feedstock, may have on

wildfire risk and will consider the adoption of a related procurement policy in the future. During pre-launch activities, however, the creation of such a policy and exhibition of preference for biomass generating resources is premature and will be addressed in the future, following the completion of upcoming launch activities.

In future solicitations, the City will identify whether any of the bidding generating facilities are located within Tier 2 or Tier 3 of the Commission's Fire-Threat Map. When evaluating executing a contract with a facility located in Tier 2 or Tier 3, the City will consider requiring that the seller utilize elevated wildfire prevention and safety measures for any construction, operation, and maintenance activities.

### **XI.2. Decommissioning Facilities**

As the City has yet to complete its initial long-term renewable energy contracting efforts, it has not developed any plans or requirements related to the disposition of associated generating facilities following completion of applicable delivery terms. For future contract negotiations, the City will evaluate requiring the seller to provide a project safety plan or a similar type of reporting document, which will include information on procedures for identifying and remediating safety incidents, as well as describing any relevant requirements (such as those associated with the permitting of the facility) for the decommissioning of the facility.

### **XI.3. Climate Change Adaptation**

The City's decision to offer 75% renewable energy through its default service option should mitigate climate change risk via increased use of renewable energy resources and related greenhouse gas emission reductions. In future solicitations, the City will consider developing additional bid evaluation criteria based on climate change risks factors, including but not limited to risks associated with facilities located in regions that are forecasted to be impacted by higher

instances of sea-level rise, flooding, wildfires, and/or elevated temperatures. As stated above, the City will provide more detailed strategies for climate change adaptation in a future RPS Procurement Plan.

#### **XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events**

As the City has yet to commence CCA operations, potential impacts related to future PSPS events are uncertain. However, with regard to resource planning, it is likely that a PSPS event impacting the City would marginally reduce retail electric sales for CCA customers and, as a result, would generate a very small increase in the proportionate share of renewable energy supply accruing to the City (if renewable supply agreements continue to perform as expected during such events).

As the City executes contracts with renewable generating facilities, it will evaluate the risk of the loss of generation associated with PSPS events both for facilities that are already online and for facilities that are still under development. Based on the impact of prior PSPS events to generating facilities, the City anticipates that the total quantity of any PSPS-related reductions in RPS-eligible generation will be relatively small and would likely be offset by the potential reduction in retail sales that would result from PSPS events that directly impact the City's customers. Therefore, the likelihood of a material impact to the City's renewable energy planning process or related performance metrics seems unlikely.

#### **XI.5. Biomass Procurement**

As the City has yet to complete its initial long-term renewable energy contracting efforts, it is difficult to predict how its renewable energy supply portfolio will evolve over time. While the City has no specific biases (for or against) biomass resources, the prospect of procuring such resources will be dependent upon offers received during future solicitation processes. To the

extent that future biomass offers/proposals are competitive (with similar offers received from other resource types) and/or in the event the City adopts policies explicitly supporting the acquisition of biomass energy resources, the City will strongly consider the inclusion of biomass energy within its renewable energy supply portfolio.

## **XII. Consideration of Price Adjustment Mechanisms**

During future contracting processes, and consistent with SB 350 and SB 100, Santa Barbara will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index.

## **XIII. Curtailment Frequency, Cost, and Forecasting**

This Section responds to the questions presented in Section 6.13 of the ACR<sup>6</sup> and describes Santa Barbara's strategies and experience so far in managing Santa Barbara's exposure to negative pricing events, overgeneration, and economic curtailment for Santa Barbara's region and portfolio of renewable resources.

### **XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours**

Santa Barbara is a new CCA organization, which has yet to commence operations, and the City continues to learn a great deal about the California energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents Santa Barbara's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating

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<sup>6</sup> ACR at 33-34.

facilities that have been brought online throughout the western United States, the California Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events. As of the end of 2019, California had over 12,800 MW of solar, 9,400 MW of behind-the-meter solar, and 5,900 MW of wind.<sup>7</sup> This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged 64.3% percent over the past 4 years (May 2018 to May 2022), and in May of 2022 the monthly maximum load served by wind and solar was just under 95%, while the maximum 5-minute amount of all renewables serving load was 103.5%.<sup>8</sup> To address the resulting instances of over-supply, the amount of curtailment of wind and solar in the CAISO has significantly increased each year from 2015 through 2020, totaling 187,000 MWh in 2015, 308,000 MWh in 2016, 379,510 MWh in 2017, 461,043 MWh in 2018, 965,241 MWh in 2019, and 1,586,500 MWh in 2020.<sup>9</sup> As of May 31, 2021, the total curtailment of solar and wind year to date is already 1,062,270 MWh.<sup>10</sup> For 2021 the total level of wind and solar curtailments was 1,504,803 MWh.<sup>11</sup> Curtailment is typically the highest during the months of March, April, and May when hydroelectric generation is historically at its highest. Curtailment levels and percentages for the CAISO, as well as an analysis of negative prices and forecasted curtailments from those negative prices, were presented above in Section VII.

In the CAISO energy markets, much of the curtailment of renewable resources is

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<sup>7</sup> California Energy Commission, Renewable Energy Tracking Progress, Feb. 2020, at 6, *available at* [https://www.energy.ca.gov/sites/default/files/2019-12/renewable\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2019-12/renewable_ada.pdf).

<sup>8</sup> CAISO, Monthly Renewables Performance Report, May 2022, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2022.html>.

<sup>9</sup> CAISO, Managing Oversupply, Wind and Solar Curtailment Totals, updated June 6, 2021, *available at* <http://www.caiso.com/informed/Pages/ManagingOversupply.aspx>.

<sup>10</sup> *Id.*

<sup>11</sup> See Curtailment table in Section VII above.



achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above in Section VII as to why curtailments are not expected to increase as they have over the past few years will apply to negative prices in a similar manner to curtailments. This has influenced CalChoice's ten-year negative price forecast which mirrors the frequency of historical renewable energy curtailments. As explained elsewhere in this document, the City will take steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources. The City will continue to monitor this situation to the extent such circumstances are likely to impact contract administration and/or future procurement activities. If prospective renewable generating opportunities are located in areas that are prone to frequent instances of negative market pricing (based on available historical data), the City will be sure to evaluate such data to better understand prospective financial impacts and/or pursue contractual pricing structures that will insulate the CCA program from such risks. Until such time that the City begins considering specific renewable project/contract opportunities, however, the City assumes that incidences of over-generation will continue to occur (or increase) in areas of the state with low load and relatively high levels of generation. To the extent there are not opportunities to store, export or otherwise use such generation as it occurs, the City understands that market pricing would likely be suppressed to the extent that generation exceeds load; and to the extent that generation meaningfully exceeds load, market pricing could turn negative (or significantly negative). This concern will be considered by the City when evaluating future renewable project/contract opportunities, and to the extent that certain project locations seem predisposed to

incidences of negative pricing, the City will weigh such risk against other available project/contract opportunities. Ultimately, the City must satisfy its RPS procurement mandates and will need to procure amongst available opportunities, even if such opportunities present related risks to the City – in such instances, the City may seek to minimize its negative price risk through contract structures that alleviate these concerns for the buyer.

### **XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years**

Santa Barbara is a new CCA organization, which has yet to commence operations and has not yet completed a 10-year negative pricing analysis. Based on the City's initial contracting efforts (including available project locations, contract structures, pricing structures, etc.), which have yet to occur, the City will determine whether such analysis will be instructive in understanding potential issues (directly related to its prospective renewable energy contracts) that may occur due to instances of negative pricing. At this time, however, the completion of such an analysis is premature and not deemed necessary – in particular, there would be no apparent value to the City in preparing a random 10-year negative price forecast without such forecast being related to a specific project/contract opportunity; without such a relationship, the noted forecast would provide meaningless values/data that would not be instructive in assembling or managing the City's eventual RPS supply portfolio.

The City notes that the “shelf life” of a 10-year negative price forecast is generally very brief. The City is also aware that curtailment activities (due to incidences of deeply negative pricing at certain time of day) may reduce expected renewable energy deliveries and will consider such risks in its planning and contracting processes. The City is hopeful that the Commission appreciates this perspective, and the City will look forward to providing additional information in this regard after it has completed initial procurement efforts and has specific

project/contract opportunities to analyze/evaluate. At that time, the requested 10-year negative price forecast *may* be more insightful to the City and other LSEs.

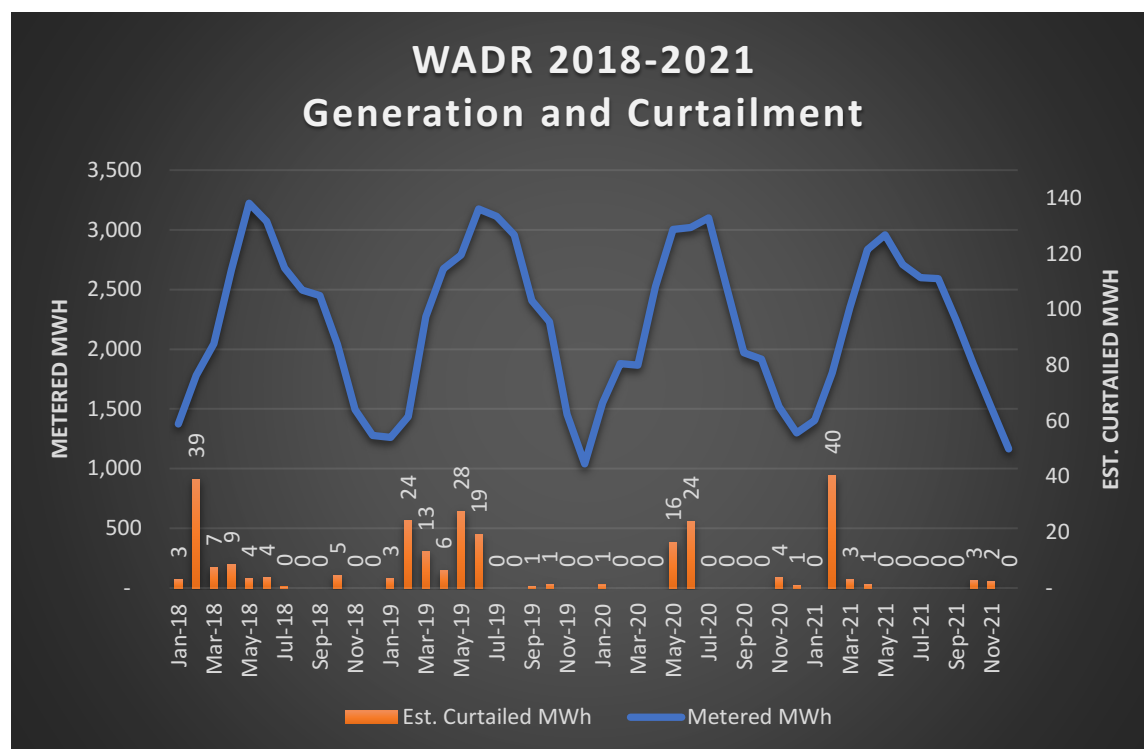
### **XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California**

Santa Barbara is a new CCA organization, which has yet to commence operations. As such, the City has no experience managing exposure to negative price risk but has initiated discussions with CalChoice to learn more about this topic.

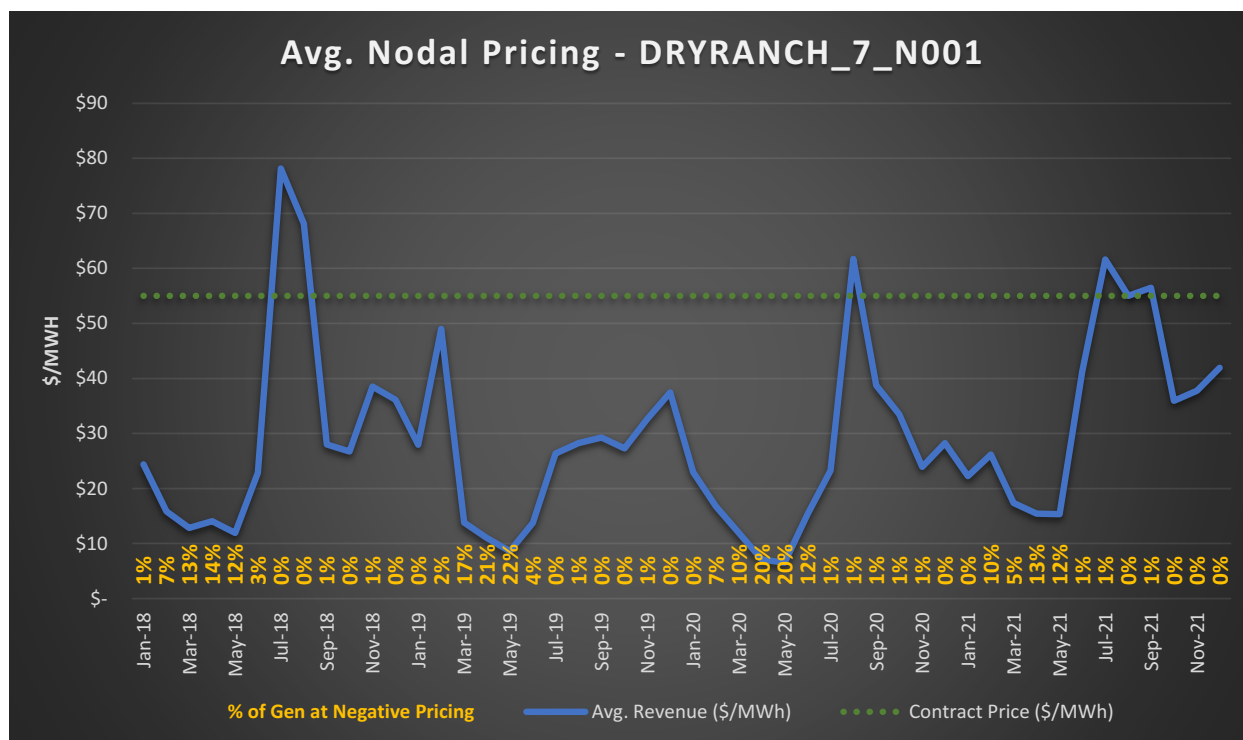
Based on its association with CalChoice, which facilitates informational sharing and interagency coordination amongst its members, the City has been made aware of LCE's ongoing experiences managing negative pricing and curtailment risk. LCE has advised CalChoice of the following information regarding its first long-term power purchase agreement with the 10 MW Western Antelope Dry Ranch ("WADR") photovoltaic solar facility, which is located in Lancaster. During its operating history with this renewable generating facility, LCE has experienced instances of negative pricing at certain points in time. Recent data suggests that such instances are more frequent during the Spring season (months of March, April and May) and, consistent with the City's observations regarding curtailment reflected in Section XIII.1, indicates that suppressed pricing generally results from relatively strong solar production throughout the region, coupled with comparatively low energy usage (when moderate seasonal temperatures prevail). To the extent that California experiences strong regional hydroelectric production/imports, negative pricing pressures may be exacerbated.

Based on 2018, 2019, 2020, and 2021 historical data, CalChoice observed that negative prices have impacted facility generation during 7% to 22% of solar-producing hours during the months of February, March, and April. Negative pricing in other months is far less prevalent, affecting facility generation on a limited basis (occurring during zero to 10% of hours in which

facility generation has occurred). In terms of curtailment, the City understands that LCE has developed a bidding strategy with its scheduling coordinator that limits exposure to negative pricing based on a pre-determined bid floor (meaning, a pre-determined negative price, below which facility generation would be curtailed), but LCE has only experienced facility curtailments totaling 261 MWh over the aforementioned four-year period, or 0.2% of total potential energy production (which approximates 106,000 MWh during this same four-year period). The impacts of curtailment/negative pricing costs incurred by LCE have been similarly limited. The following chart indicates total monthly generation from the WADR facility during the 2018, 2019, 2020, and 2021 calendar years as well as estimated monthly curtailed MWh (note the differences in scale reflected on each axis).



Adjacent nodal pricing also remains relatively strong, despite substantial solar generation within the region. Average energy pricing at the DRYRANCH\_7\_N001 node, the basis for WADR energy settlements, continues to show limited incidents of negative pricing. Over the four-year period reflected in CalChoice's analysis, average revenues collected by LCE for WADR-generated electricity are \$28.39/MWh. The following chart reflects average nodal pricing during the 2018, 2019, 2020, and 2021 calendar years as well as the percentage of WADR generation occurring during periods of negative pricing.



Over time, CalChoice will continue monitoring pricing and curtailment data to determine if regional grid conditions are materially changing – four years is a relatively brief period of time for such an analysis, particularly when the composition of resources interconnected to California's bulk electric system continues to undergo significant changes, and while the City finds this information to be helpful, it is also mindful that such changes may substantially alter

the trajectory of pricing data at this node. To the extent that negative prices become more severe (meaning, more deeply negative), the City understands that LCE may adapt its bidding strategy to limit potential financial impacts. Curtailed energy volumes will also be monitored by CalChoice over time, but based on MWh curtailed to date, the City understands that LCE does not foresee any imminent concerns impacting its achievement of compliance with RPS procurement mandates. CalChoice is prepared to support similar data monitoring for other supply opportunities that may be pursued by its membership and will coordinate with such members regarding pertinent bidding strategies, as appropriate.

If the City pursues supply agreements that could expose the organization to negative pricing and curtailment risk, the City would consult with CalChoice to perform pertinent analyses that would be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing. Based on information/data derived through such analyses, the City would coordinate with CalChoice and its scheduling coordinator to develop a bidding strategy, if deemed necessary, that would create desired limitations to such negative price risk, acknowledging however, that any curtailment decisions (related to negative pricing) would reduce the expected quantity of renewable energy to be received from such contracts – such circumstances could necessitate supplemental procurement, if meaningful delivery shortfalls occur.

#### **XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices**

Santa Barbara is a new CCA organization, which has only just commenced operations. As such, the City has limited information on direct costs related to negative pricing (for incidences of overgeneration).

### **XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices**

While curtailment is a viable renewable integration strategy that may be more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG emitting electricity, and excessive curtailment could impact the ability of the state to meet its environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved EV charging functionalities, and smart deployment of distributed energy resources. The Commission's Integrated Resource Plan ("IRP") proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures will need to be modeled and incorporated into forecasts of future curtailment.

Santa Barbara will consider the impact of curtailment and negative pricing on its future supply portfolio and will factor potential curtailment into its long-term planning. Due to the difficulty in accurately forecasting curtailment, Santa Barbara will coordinate with CalChoice in its review of historical data on curtailment (such as the data on curtailments in the CAISO

present above in Section VII) and negative pricing for the regions in which its prospective and contracted generating resources are located. When Santa Barbara evaluates new procurement, the potential amount of future curtailment will be one factor that Santa Barbara considers. While Santa Barbara has not developed an individualized forecast of future curtailment, Santa Barbara will factor potential curtailment into both its minimum margin of procurement (described in Section IX) and its Risk Assessment (Section VII), if deliveries associated with the City's portfolio of renewable energy supply commitments could be impacted by buyer- or seller-initiated curtailment activities. Additionally, and if applicable, Santa Barbara will take action to limit the impacts of curtailment on its ratepayers and potential compliance shortfalls that could result from significant curtailment events. Santa Barbara expects that it will pursue contract terms that recognize and limit the potential financial impacts of negative pricing and give the City greater flexibility to direct economic curtailment.

#### **XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.**

The City has incorporated terms in its contracts to limit consequences from negative prices. These include contracts with fixed quantities of RPS resources, and contracts with penalties for failure to deliver required amounts of RPS energy. An example of such language included in City contracts is:

**Guaranteed Energy Production:** Seller shall be required to deliver to Buyer no less than the Guaranteed Energy Production (as defined below) in each two (2) Contract Year block (as opposed to rolling) period during the Delivery Term (“**Performance Measurement Period**”). “**Guaranteed Energy Production**” means an amount of Product, as measured in MWh, equal to one-hundred fifty percent (150% of the average Expected Energy (as set forth on the Cover Sheet) for each Performance Measurement



Period. The calculation will be performed once each Performance Measurement Period, beginning with the second anniversary of the Delivery Term Start Date.

#### **XIV. Cost Quantification**

As the City has yet to procure requisite renewable energy supply, there is currently no information to report in the Cost Quantification Table, Appendix E. As such, and in consideration of direction provided by the Commission, the City has completed Appendix E, reflecting zero values due to fact that contractual commitments for requisite renewable energy supply have yet to be arranged. The City will update such information in future RPS Procurement Planning documents when it becomes available.

#### **XV. Coordination with Integrated Resource Planning Proceeding**

The resources identified in this RPS Procurement Plan are consistent with resources identified in Santa Barbara's most recent IRP, which were approved by Santa Barbara's Governing Council and provided to the Commission for certification on September 1, 2020. As required by the ACR,<sup>12</sup> Santa Barbara includes the following table that describes how Santa Barbara's 2022 RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003). To the extent there are changes related to the IRP that would impact information reflected in this table or elsewhere in this RPS Procurement Plan, the City will further describe such items in a subsequent planning document, as appropriate.

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<sup>12</sup> ACR at 30-33.

IRP Section Subsection	RPS Alignment in IRP	
<b>III. Study Results</b> <b>A. Conforming and Alternative Portfolios</b>	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each of their Conforming Portfolios being developed in their IRP Plans for Commission approval and certification. This should include:	
	<ol style="list-style-type: none"> <li><i>1. Existing RPS resources that the retail seller owns or contracts.</i></li> <li><i>2. Existing RPS resources that the retail seller plans to contract with in the future.</i></li> <li><i>3. New RPS resources that the retail seller plans to invest in.</i></li> <li><i>4. New and existing resources that will be used to meet Mid-Term Reliability obligations adopted in D.21-06-035.</i></li> </ol>	<p>The City has yet to complete its initial renewable energy contracting efforts and, therefore, has no information to report other than those anticipated RPS resources reflected in its IRP.</p> <p>The City expects to participate in its initial renewable energy solicitation in early 2021 and will gather information regarding prospective renewable energy contracting opportunities during that process, but it has yet to develop a clear understanding of the specific resources that it will contract with in the future.</p> <p>However, as part of its 2020 IRP filing, the City submitted two Preferred Conforming Portfolios that achieve its proportional share of both the 46 and 38 MMT GHG targets. Because the City has yet to identify its initial long-term RPS supply commitments that will contribute to the achievement of such portfolio goals, all new and existing resources reflect those that the City intends to contract with in the future. Such procurement efforts are expected to contribute to the achievement of relevant GHG targets as well as RPS procurement requirements, including the 65% long-term contracting requirement.</p> <p>Description of Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>• 46 MMT Conforming Portfolio: Portfolio that achieves the City’s proportional share of a 46 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 46 MMT Conforming Portfolio assumed the use of new RPS resources not yet placed under contract, including: 15 MW of new solar resources; and 10 MW of new wind resources</li> <li>○ The 46 MMT Conforming Portfolio</li> </ul> </li> </ul>

		<p>also assumed the use of existing RPS resources not yet placed under contract, including: 11 MW of existing solar resources; 30 MW of existing wind resources; and 3 MW of existing biomass resources</p> <ul style="list-style-type: none"> <li>○ The City's 46 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 46 MMT reference system plan</li> </ul> <ul style="list-style-type: none"> <li>● 38 MMT Conforming Portfolio: Portfolio that achieves the City's proportional share of a 38 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 38 MMT Conforming Portfolio assumed the use of new RPS resources not yet placed under contract, including: 15 MW of new solar resources; and 10 MW of new wind resources</li> <li>○ The 38 MMT Conforming Portfolio also assumed the use of existing RPS resources not yet placed under contract, including: 18 MW of existing solar resources; 48 MW of existing wind resources; and 4 MW of existing biomass resources</li> <li>○ The City's 38 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 38 MMT reference system plan</li> </ul> </li> </ul> <p>Until the City successfully launches its CCA program and demonstrates a successful track record during early-stage operations, including the accrual of prudent financial reserves, it would be premature to speculate on future resource investments.</p> <p>Description of 2022 Preferred Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>● 38 MMT in 2030 and 30 MMT in 2035</li> </ul>
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		<p>Conforming Portfolio</p> <ul style="list-style-type: none"> <li>○ This is a continuance of the 38 MMT portfolio from the 2020 IRP. It is anticipated at this time that the contracts outlined above will continue to be sufficient</li> <li>• 30 MMT in 2030 and 25 MMT in 2035</li> </ul> <p>Conforming Portfolio:</p> <ul style="list-style-type: none"> <li>○ The City is only beginning to determine how it plans on meeting this new, lower GHG requirement. The City anticipates that the procurement required will be similar to the outlines discussed above to meet the 38 MMT portfolio from the 2020 IRP.</li> </ul> <p>Meeting the Mid-Term Reliability obligations from D.21-06-035:</p> <ul style="list-style-type: none"> <li>• The City is participating in the Joint CalChoice, Desert Community Energy Authority, and Clean Energy Alliance Mid-Term Reliability Request for Proposals. Currently, negotiations are ongoing with short-listed resources.</li> </ul>
<p><b>IV. Action Plan</b></p> <p><b>A. Proposed Activities</b></p>	<p>Retail sellers should describe how they propose to use RPS resources to implement both Conforming Portfolios. Narratives should include:</p>	
	<p><i>1. Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i></p> <p><i>2. Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i></p>	<p>The City expects to participate in its initial renewable energy solicitation in early 2021. Based on the outcome of this process, the City will determine the process(es) required to fulfill future renewable energy procurement requirements.</p> <p>To ensure compliance with its GHG and RPS targets, the City plans to substantially rely on GHG-free and RPS-eligible resources while contributing to statewide reliability requirements and responsibly managing overall portfolio costs. This approach is generally consistent between the 46 MMT Conforming Portfolio and 38 MMT Conforming Portfolio in the 2020 IRP Plan, as well as the 30 MMT and 25 MMT portfolios required to be included in the 2022</p>

		<p>IRP Plan.</p> <p>Due to the City not serving customers when D.19-11-016 was adopted by the Commission, the City does not have an incremental capacity procurement obligation per D.19-11-016. Instead, Southern California Edison has assumed the responsibility for the incremental capacity procurement obligations on behalf of the City's customer base and will charge the City and its customers for the cost of the capacity procured through the final Modified Cost Allocation Mechanism. The incremental capacity contracts that Southern California Edison has entered into or will be entering into to satisfy the requirements of D.19-11-016 have been reflected in the City's 38 MMT and 46 MMT Resource Data Templates and throughout the City's IRP Narrative.</p> <p>The City expects to administer future solicitation processes to fill outstanding resource needs required to meet portfolio specifications reflected in its 46 MMT and 38 MMT Preferred Conforming Portfolios as well as ongoing RPS procurement obligations. As noted elsewhere in this RPS Procurement Plan, the City will update the Commission with regard to the outcomes of its current long-term RPS contract negotiations in a future iteration of this planning process.</p>
<b>IV. Action Plan</b> <b>B. Procurement Activities</b>	The retail seller should describe the solicitation strategies for the RPS resources that will be included in both Conforming Portfolios. This description should include:	
	<ol style="list-style-type: none"> <li><i>1. The type of solicitation.</i></li> <li><i>2. The timeline for each solicitation.</i></li> <li><i>3. Desired online dates.</i></li> <li><i>4. Other relevant procurement planning information, such as solicitation goals and objectives.</i></li> </ol>	<p>The City may participate in distinct solicitations for different products (for example: specific renewable energy products, generating resources or storage infrastructure), or it may choose to solicit multiple products in the same solicitation. These solicitations will be competitive and may be similar to the City's initial long-term RPS solicitation, which was previously described in this RPS Procurement Plan.</p> <p>The City will administer future solicitations, as necessary, to promote consistency with the resource development plan identified in the IRP</p>

		<p>(for purposes of promoting achievement with state-mandated RPS targets as well as the City’s internal targets). As noted above, the City anticipates administering upcoming solicitation activities consistent with the process and timeline described in Section I.</p> <p>During administration of future procurement processes, the City will utilize the evaluative and contract management processes (further described above in Section X and elsewhere in this Plan) to promote timely project completion and improve planning certainty.</p>
<b>IV. Action Plan</b>  <b>C. Potential Barriers</b>	<p>Retail sellers should provide a summary of the potential barriers to implementing both Conforming Portfolios as they relate to RPS resources. The section should include:</p>	
	<p><i>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in both retail sellers’ Preferred Portfolios.</i></p> <p><i>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</i></p>	<p>The City does not expect any procurement barriers to impede its future contracting for new renewable energy resources, but notes that even though a balanced, diverse RPS portfolio is desirable, the limited resource availability and lead time required for some technology types may necessitate planning flexibility. The City also observes that the rigorous demands of California’s RPS program, particularly the currently effective 65 percent long-term contracting mandate, may necessitate contracting activities with a portfolio of resources that will evolve considerably over time – more specifically, the City may need to pursue initial supply commitments with a portfolio of resources that does not exactly reflect its eventual/ideal characteristics related to resource diversity and/or reliability. Pursuit of such portfolio characteristics will continue to be a work in progress during the City’s first several procurement efforts and will evolve throughout the upcoming 10-year planning period.</p> <p>The key risk affecting the City’s achievement of the 46 MMT and 38 MMT Preferred Conforming IRP Portfolios in the 2020 IRP Plan and the 30 MMT and 25 MMT portfolios in the 2022 plan is reliance on new resources – while the City intends to contract with highly experienced and qualified project developers</p>

		<p>(when new-build resources are deemed necessary), there is always a limited risk of project failure.</p> <p>In consideration of the experiences of other CalChoice members and its own knowledge of the experiences of other CCAs, the City does not have any substantive concerns regarding its ability to achieve levels of renewable energy procurement that will be required to satisfy pertinent RPS mandates or IRP targets. If such concerns happen to change in the future, the City will accordingly notify the Commission in a subsequent iteration of this planning process.</p>
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Dated: June 30, 2022

Respectfully submitted,

/s/ Alelia Parenteau

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# **Appendix A**

**Redlined Version of Draft 2022 RPS Plan**



**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

Rulemaking 18-07-003

**~~FINAL 2021~~DRAFT 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT  
PLAN  
OF THE CITY OF SANTA BARBARA**

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Dated: [June 30](#)~~February 17~~, 2022

**BEFORE THE PUBLIC UTILITIES COMMISSION  
OF THE STATE OF CALIFORNIA**

Order Instituting Rulemaking to Continue  
Implementation and Administration, and Consider  
Further Development, of California Renewables  
Portfolio Standard Program.

Rulemaking 18-07-003

**~~FINAL 2021~~DRAFT 2022 RENEWABLES PORTFOLIO STANDARD PROCUREMENT  
PLAN  
OF THE CITY OF SANTA BARBARA**

In accordance with the California Public Utilities Commission’s (“Commission”) March 30, 2021 *Assigned Commissioner and Assigned Administrative Law Judges’ Ruling Identifying Issues and Schedule of Review for 2022 Renewables Portfolio Standard Procurement Plans and Denying Joint IOUs’ Motion to File Advice Letters for Market Offer Process (“ACR”).* ~~2021 Renewables Portfolio Standard Procurement Plans (“ACR”) and the Decision on 2021 Renewables Portfolio Standard Procurement Plans, issued on January 18, 2022 (“D.22-01-004”)~~, the City of Santa Barbara (“Santa Barbara” or “City”) hereby submits this ~~Final 2021~~Draft 2022 Renewables Portfolio Standard Procurement Plan (“RPS Procurement Plan”). As directed by the ACR, this RPS Procurement Plan includes responses for the issues expressed in ACR sections ~~5.1-5.16~~6.1-6.16.

Santa Barbara notes that certain issues and requests in these ACR sections apply to the other retail sellers (electrical corporations and electric service providers), and do not extend to Community Choice Aggregators (“CCAs”). Santa Barbara is nevertheless voluntarily responding to these ACR sections in the interest of transparency and in order to collaborate with the Commission. The submission of this RPS Procurement Plan pursuant to the ACR, however, should not be construed as a waiver of the right to assert that components of Senate Bill (“SB”)

350 or Commission decisions and rulings on RPS Procurement Plan submittals, do not extend to CCAs, and Santa Barbara reserves the right to challenge any such assertion of jurisdiction over these matters.

As indicated in the City's previously submitted RPS Procurement Plans, the Commission should consider the relatively small size and related administrative structure under which the City intends to operate its CCA program. In particular, Santa Barbara has pursued CCA implementation activities under a shared service model, which means the City has joined together with other, regionally located CCA programs to promote administrative efficiencies by outsourcing many highly specialized services typically required for successful CCA administration and operation. The California Choice Energy Authority, or CalChoice, is a joint powers authority ("JPA"), the members of which include the cities of Lancaster and San Jacinto. CalChoice was formed to help cities in Southern California Edison's ("SCE") service territory evaluate, implement, and operate CCA enterprises without having to share or cede (by virtue of proportionate influence during decision making processes) control that could result from participation in larger, multi-jurisdictional JPAs or without independently taking on the significant financial liabilities (*e.g.*, start-up costs, staffing, and ongoing administration) of a single entity CCA. CalChoice is the organization selected by the City to provide requisite services and inter-agency coordination amongst regionally located, single-city CCA programs.

There are currently ten (10) Southern California communities that are being supported under independent administrative services agreements with CalChoice, including the City.

These communities include the Town of Apple Valley ([doing business as Apple Valley Choice Energy, or "AVCE"; successful CCA launch in April 2017](#)); and the cities of Baldwin Park ([formerly doing business as Baldwin Park Resident Owned Utility District, or "BPROUD,"](#)

which successfully commenced CCA service in October 2020, then later decided to terminate program operations through an orderly process that resulted in the return of its customers to SCE in March 2022), LCE (successful CCA launch in May 2015), Palmdale (doing business as Energy for Palmdale’s Independent Choice, or “EPIC”; CCA launch is planned for October 2022), Pico Rivera (doing business as Pico Rivera Innovative Municipal Energy, or “PRIME,” which successfully commenced the delivery of CCA service in September 2017), Pomona (doing business as Pomona Clean Energy; successful launch in October 2020), Rancho Mirage (doing business as the Rancho Mirage Energy Authority; successful CCA launch in May 2018), San Jacinto (doing business as San Jacinto Power; successful CCA launch in April 2018) and Santa Barbara (doing business as Santa Barbara Clean Energy; successful CCA launch in October 2021). CalChoice’s team of experienced CCA practitioners works in cooperation with City and Town leadership to administer CCA operations. Responsibilities for CCA program management are divided, but closely coordinated, amongst these constituents. For example, CalChoice’s team ~~successful CCA launch in April 2017); and the cities of Baldwin Park (successful launch in October 2020, however it has announced in October 2021 that it will end its CCA and return customers to SCE in February 2022), Commerce (launch expected in 2023), Lancaster (successful CCA launch in May 2015), Palmdale (CCA launch is currently planned for October 2022), Pico Rivera (successful CCA launch in September 2017), Pomona (successful launch in October 2020), Rancho Mirage (successful CCA launch in May 2018), San Jacinto (successful CCA launch in April 2018) and Santa Barbara (successful CCA launch in October 2021). CalChoice’s team of experienced CCA practitioners, which helped launch Baldwin Park Resident Owned Utility District (“BPROUD”, which serves the City of Baldwin Park), Lancaster Choice Energy (“LCE”, which serves the City of Lancaster), Pico Rivera Innovative Municipal~~

~~Energy (“PRIME”, which serves the City of Pico Rivera), Pomona Choice Energy (which serves the City of Pomona), the Rancho Mirage Energy Authority (which serves the City of Rancho Mirage), and San Jacinto Power (which serves the City of San Jacinto),~~ provides key administrative support and advisory services, including the completion of work related to resource planning and procurement (e.g., load forecasting, solicitation administration, contract negotiation support and, specifically related to this RPS Procurement Plan, the administration of functions required to plan for and procure requisite RPS-eligible renewable energy supply). City and Town staff, including elected leadership, take lead roles in reviewing and approving electric generation rates, adopting resource planning policies and creating, implementing and administering locally focused energy programs and, in certain cases, locally situated energy infrastructure projects that support CCA program operations and the interests of participating customers.

The CalChoice service model has not only proven to be highly desirable for many smaller Southern California communities but also critically important in preserving the community-specific oversight and decision-making autonomy that would not necessarily be afforded under a larger, multi-party joint powers agency. Key decisions of each CalChoice-supported community, including rate setting, retail supply portfolio composition, disposition of financial reserves, and administration of complementary programs, are independently addressed by the respective governing councils of each community and administered by staff with supporting input from CalChoice’s experienced team. The CalChoice model preserves the autonomy of each participating community by applying a “one size does not fit all” support framework, which allows participating communities to establish and pursue objectives and key parameters that are directly responsive to the unique constituents and interests within their respective communities.

In terms of CalChoice's role in supporting the renewable energy planning and procurement functions of each participating community, CalChoice coordinates directly with each community to identify required levels of renewable energy procurement (as specified under California's RPS Program) as well as any above-RPS procurement targets voluntarily adopted by each participating community ([that may be related to specific retail service offerings that provide renewable energy deliveries in excess of statewide mandates](#)~~that may be related to the availability of specific retail service offerings, which provide proportionate renewable energy deliveries in excess of statewide mandates~~). Once such targets are established, CalChoice supports discussions focused on future renewable energy planning trajectories, recommended planning reserve margins, necessary long-term contracting requirements, upcoming solicitation administration, and ongoing monitoring of supplier/developer performance to promote alignment between actual and projected renewable energy supply, including the completion of any portfolio balancing activities that may be necessary to close incremental open positions or dispose of unnecessary excess/length. Such discussions between CalChoice and participating communities remain ongoing with opportunities to adjust desired renewable energy parameters over time. The information provided by participating communities is compiled by CalChoice and aggregated, if/when appropriate, to facilitate administratively coordinated procurement efforts. Due to the relatively small size of CalChoice's participating communities, meaningful administrative efficiencies have been achieved through joint solicitation administration. In particular, otherwise redundant costs and procedural elements, including solicitation administration, counterparty coordination, contract negotiations, and project development milestone tracking, are substantially minimized by coordinating/centralizing such functions/roles through CalChoice. These ~~highly~~ desirable outcomes are critically important to CalChoice's participating communities by

reducing administrative complexities and staffing requirements that would otherwise need to be addressed by each participating community while simultaneously reducing costs that would otherwise burden the financial performance of each CCA program – such an approach allows participating communities to leverage the relatively limited specialized expertise and technical acumen that are needed to successfully administer CCA enterprises without having to independently identify and hire such staff, which could be time consuming and very costly.

Subject to pertinent renewable energy mandates imposed under California’s RPS Program, participation in CalChoice’s renewable energy procurement processes (meaning solicitations and related contracting efforts) is voluntary, and member communities may independently determine whether or not to participate based on the status of each community in progressing towards such statewide mandates and, if applicable, desired levels of renewable energy procurement in excess of ~~which may exceed~~ such mandates. CalChoice does not act on behalf of its participating communities without prior direction/authorization, and any contracting processes resulting from CalChoice-administered solicitation efforts are subject to approval by the governing councils of participating communities.

When contemplating resource planning and procurement efforts that will be undertaken by California retail sellers, including the preparation of requisite RPS Procurement Plans, the City encourages the Commission to consider the stark, undeniable differences between the relatively small communities supported by CalChoice and the state’s much larger Investor-Owned Utilities (“IOUs”). The disparate scope and magnitude of procurement responsibilities that must be undertaken by an IOU, relative to a small CCA, necessitate different approaches and organizational support. In the case of an IOU, there will be an entire procurement department available to support requisite efforts, including a team of attorneys, analysts, and other staff

members – the ~~level of magnitude of requisite~~ procurement activities undertaken by an IOU seems to necessitate such an approach. In the case of a small CCA, however, there may only be a few renewable energy supply contracts needed to satisfy pertinent renewable procurement mandates at any point in time – in consideration of the work required to support such efforts, a small CCA would not necessarily want or need to hire several staff members, invest in costly systems or perform elaborate analyses, as the scope of responsibilities that must be undertaken to support RPS compliance activities is relatively narrow in comparison to an IOU. The City encourages the Commission to consider these differences when reviewing/evaluating the respective RPS Procurement Plans submitted by California retail sellers – differing levels of detail, procedure, complexity, and coordination are likely very appropriate within the planning documents submitted by small, medium, and large organizations; and where the Commission may be inclined to identify informational deficiencies in certain areas (based on inevitable differences between content provided in the RPS Procurement Plans of California’s IOUs and smaller CCA programs), the City encourages the Commission to consider the inappropriateness of a “one size fits most/all” approach in managing widely varying RPS planning and procurement obligations. While there may be some commonalities amongst planning and procurement practices reflected in the various RPS Procurement Plans submitted through this process, it seems reasonable to assume that noteworthy differences will be prevalent.

With regard to the City, its participation in CalChoice’s shared service model will result in inevitable similarities when comparing the RPS Procurement Plans submitted by each participating community – due to the coordinated approach undertaken by CalChoice, key planning elements and procurement processes may, in fact, be identically described in each participant’s respective RPS Procurement Plan. The City respectfully requests that the



Commission consider this inevitability while reviewing its RPS Procurement Plan – the similarities between planning documents submitted by CalChoice’s participating communities are reflective of thoughtful coordination, an interest in promoting administrative efficiency, and an effort to suppress planning and procurement costs that would be much higher if each participating community independently managed such efforts. To the extent that CalChoice remains successful in promoting inter-agency coordination and efficiencies, participating customers are expected to benefit via retail rates that pass through the benefits of such efforts.

The Commission is also encouraged to consider the differing operational stages (and, in the City’s case, pre-operational stages) of reporting load serving entities (“LSEs”). Certain direction and guidance provided by the Commission seems to suggest that each element of the RPS planning process should be universally applicable across all LSEs, regardless of pertinent operational status, and that is not the case. For example, it is likely inappropriate and unhelpful for a newer CCA organization, like the City, to prepare a ten-year negative price forecast or curtailment analysis when existing contractual commitments (or lack thereof) would render such information irrelevant and unhelpful – given the heightened attention and related information focused on changing market conditions, increased incidents of negative pricing and related energy curtailment, all LSEs are aware, to some extent, of these potential risk factors, but that does not mean a related forecasting effort or other form of analysis would provide useful information to each LSE. For example, a generalized ten-year negative price forecast or curtailment analysis would have no meaning for a new LSE without existing contractual commitments or if its contractual commitments did not expose the buyer to negative price risk (due to the application of settlement mechanisms and/or fixed volumetric commitments that eliminate such concerns [or the specification of fixed delivery quantities](#)). Similarly, it would not

make sense for an LSE to prepare forward curtailment estimates if its renewable contract portfolio primarily included fixed volume supply commitments or did not allow discretionary curtailment via terms and conditions reflected in such contracts~~did not include contracts reflecting such exposure~~. Again, the City encourages the Commission to consider the appropriateness of universally requiring certain information within this planning process when such information may not be relevant or useful to the reporting entity (or other parties that may choose to review such information) – certain sections of these plans should be marked as “if necessary” or “if applicable” without the assumption that all LSEs should be comprehensively responsive in addressing such topics.

With regard to understanding the consequences of compliance shortfalls, the communities supported by CalChoice have been advised of both direct (*e.g.*, financial penalties and findings of non-compliance) and indirect (*e.g.*, reputational damage that might accrue to participating communities or CCA organizations, generally) impacts associated with such deficiencies and have chosen to pursue risk mitigation measures that are considerate of each participating community’s aversion to such risks as well as the related administrative complexity, cost and rigor that were deemed appropriate to achieve the desired level of mitigation in the unlikely event that they occur.

In considering its evolving informational needs, the City has engaged CalChoice to prepare a more robust risk assessment, as reflected in this RPS Procurement Plan. Details related to this risk assessment are further described below and focus on the City’s current portfolio of RPS supply agreements, evaluating potential portfolio impacts related to lower-than-expected deliveries and contract failure/termination amongst other considerations. In reviewing its analysis, the City feels confident that its MMoP, as further described herein, and general RPS

procurement strategy will satisfactorily address applicable compliance mandates throughout the planning period. ~~To date, the completion of elaborate risk analyses and/or costly studies have not been considered necessary or desirable by participating communities, but if CalChoice happens to receive differing guidance (in the future), it will act in accordance with direction provided by the communities it supports. For now, the participating communities, including the City, have elected to pursue relatively modest renewable energy reserve margins, opting for contract structures that minimize the risk of delivery shortfalls by providing the buyer(s) with financial protections which generally offset the impacts of financial penalties (prescribed under the RPS Program) in the event of non- or under delivery.~~

Again, the relatively small communities and related renewable energy procurement efforts supported by CalChoice are not comparable to the geographic footprint and/or procurement efforts undertaken by the incumbent utility, SCE; individual communities supported by CalChoice tend to have annual renewable energy procurement targets ranging from 50-300 gigawatt hours, while SCE is expected to procure thousands upon thousands of gigawatt hours to meet its respective obligations. The significance of these differences and the complexity of related procurement efforts, including the myriad contracts typically required by larger entities, necessitate a much different scope of procedural considerations and risk mitigation measures – the RPS Procurement Plans submitted by the IOUs should not be the standard by which all other Plans are measured.

## **I. Major Changes to RPS Plan**

This Section describes the most significant changes between Santa Barbara's Final ~~2020-2021~~ RPS Procurement Plan and its ~~Final-2021~~Draft 2022 RPS Procurement Plan. A redline of this ~~Final-2021~~Draft 2022 RPS Plan against Santa Barbara's ~~Draft~~Final 2021 RPS Plan is

included as Appendix A. The City reminds the Commission that it is a relatively new CCA organization, which has yet to commence operations. As such, much of the detail requested in recently added sections will not be available until the City completes its initial renewable contracting efforts, commences operations, and gathers information related to supplier performance during early-stage operations. In the meantime, pertinent information is limited and subject to further development in future RPS Procurement Plans. The table below provides a list of key differences between the ~~2020~~ [2021](#) and ~~2021~~ [2022](#) RPS Procurement Plans:

Plan Reference	Plan Section	Summary/Justification of Change
<del>2021</del> <a href="#">2022</a> RPS Procurement Plan: Section II	Executive Summary	Updated to reflect the changes made throughout other sections of this RPS Plan.
<del>2021 RPS Procurement Plan: Section III</del>	<del>Summary of Legislation Compliance</del>	<del>Updated to describe the process for taking official positions on legislation.</del>
<a href="#">2022</a> <del>2021</del> RPS Procurement Plan: Section IV	Portfolio Optimization	<a href="#">Updated to describe Voluntary Allocation Market Offer proposal/framework approved in Decision 21-05-030 and subsequent decisions and resolutions, and potential RPS planning implications. Updated to describe procurement undertaken to comply with D.21-06-035, the Mid-Term Procurement Decision.</a> <del>Updated to acknowledge the May 20, 2021 adoption of Decision 21-05-030, which implements the Voluntary Allocation Market Offer proposal/framework, and potential RPS planning implications. Updated to acknowledge the June 24, 2021 adoption of D.21-06-035, the Mid-Term Procurement Decision.</del>
<del>2021 RPS Procurement Plan: Section IV.B</del>	<del>Responsiveness to Local and Regional Policies</del>	<del>Updated to describe impacts of local and regional policies on procurement targets, bid solicitation protocols, and forecasted supply.</del>

<a href="#">2022 RPS Procurement Plan: Section VI</a>	<a href="#">Potential Compliance Delays</a>	<a href="#">Updated narrative to incorporate changing renewable energy procurement marketplace.</a>
<a href="#">2022-2021 RPS Procurement Plan: Section VII</a>	Risk Assessment	<a href="#">Added new risk assessment.</a> <del>Added narrative addressing system reliability and lessons learned.</del>

## II. Executive Summary

Since the City’s submittal of its Final 2020 RPS Procurement Plan, which occurred on February 18, 2021, the City’s CCA planning and implementation activities led to CCA service commencement in October 2021. As indicated in its Community Choice Aggregation Plan and Statement of Intent (“[CCA Implementation Plan](#)”), which was electronically served on all parties of record in proceedings R.17-09-020, R.16-02-007, and R.03-10-003 on November 1, 2019, the City initially intended to initiate CCA customer service on May 1, 2021, providing electric generation service to approximately 34,000 service accounts located within the City, which are expected to consume approximately 290 GWh per year. Since that time, however, the City participated in numerous coordinative discussions with SCE, which resulted in delays to the previously noted implementation timeline. Due to SCE system enhancements, which were purported to present issues with CCA launch/enrollment activities, the incumbent IOU had limited windows of time that would accommodate CCA enrollment activities. As a result of these restrictions, the City and SCE agreed to support CCA launch in October 2021. With this timeline in mind, the City continues to evaluate key elements of the RPS Program and related planning implications, including the need to establish an appropriate minimum margin of procurement (MMoP) for necessary renewable energy supply, prospective compliance risks related to requisite long-term renewable energy procurement, the manner in which project development and performance risk will be assessed during the City’s renewable energy

procurement efforts, and various other considerations related to the RPS Program. As reflected in its CCA Implementation Plan, the City meaningfully exceeds statewide RPS procurement mandates, supplying 75% renewable energy to the majority of its customers (via a 75% renewable/100% carbon-free default service offering), which provides a voluntary margin of procurement (VMoP). This procurement exceeding statewide procurement mandates, in combination with the MMoP, provide an ample cushion in the event that contracted renewable energy purchases are not fulfilled as expected. This adaptation to Santa Barbara's originally intended default service offering, which was targeting the use of 100% renewable energy, was deemed necessary to improve cost competitiveness of CCA generation rates while promoting resource planning flexibility during early-stage program operations. It is also worth noting that the entirety of the City's RPS procurement will be focused on PCC1 product options, alleviating any concerns related to portfolio balancing requirements (brought about by the use of PCC2 and PCC3 products) while facilitating achievement of the City's 100% carbon-free goal for default CCA service.

Based on the delay imposed on the City's original implementation schedule, the City revised the anticipated schedule for requisite renewable energy procurement activities, which attempted to balance concerns related to premature contractual commitments and the achievement of RPS compliance. In particular, the City determined that it needed to avoid making contractual commitments until it had a definitive schedule related to the timing of service initiation and customer revenue receipt(s). Now that CCA implementation timing is more certain, the City has solidified its procurement schedule as described below. This schedule of procurement activities, which remains subject to change, will be necessary to promote early stage compliance with California's RPS Program, including requisite long-term contracting

requirements is as follows: (1) Q1 2021 (COMPLETE) – finalization of anticipated renewable energy requirements, inclusive of a resultant minimum margin of procurement (relative to the City’s intended plan to offer 75 percent renewable energy as its default service option); (2) Early-Q2 2021 (COMPLETE) – finalization of solicitation requirements and schedule, inclusive of any resource-related specifications, supplier qualifications and evaluation criteria; (3) Late-Q2 (COMPLETE) – release of long-term renewable energy solicitation, receipt of responses, evaluation of responses and short-list selection; (4) Late-Q2 2021 (COMPLETED) – bid receipt (on June 11, 2021), identification of preferred supplier(s) and commencement of contracting efforts. Unfortunately, after examining the bids and further discussions no RPS deals resulted from this long-term RPS solicitation.

The City has also completed negotiations related to its first long-term renewable energy supply agreement. This opportunity was identified via bilateral discussions with an experienced supplier of PCC1 products, Powerex, which has worked with numerous CCA organizations. The agreement covers a ten year period with an average of 50,000 MWh of project energy delivered every year.

In the meantime, the City will continue evaluating and solidifying pertinent renewable energy planning activities, including the need to establish a minimum margin of procurement and a voluntary margin of procurement in light of the City’s intent to supply 75 percent renewable energy through its default service option, specifications to be included in future solicitations for requisite renewable energy supply, the manner in which project development and performance risk will be assessed during the City’s renewable energy procurement efforts, and various other considerations related to the RPS Program. The City is also gaining insight and additional information related to CalChoice’s recent experiences administering a long-term renewable

energy solicitation on behalf of its operational CCA participants. The information gained from such experience will facilitate the refinement of future solicitations involving the City and (hopefully) the recruitment of well-suited, cost-competitive renewable energy offers from experienced developers and facility operators.

Until additional details are gathered with regard to early-stage performance by the City's renewable energy suppliers (which will not occur until the City places renewable energy supply under contract and successfully launches CCA activities), City staff, in cooperation with CalChoice, will wait to evaluate the City's residual RPS open positions (that may exist after initial RPS contracting efforts are complete) and any subsequent procurement activities that may be necessary to promote achievement of desired RPS procurement targets, including any related planning reserves. Analysis of the amounts of wind and solar curtailments in the CAISO over the 2018-2021 period show that curtailments were well below 1% of total load, and under 5% of the total renewable generation related to these specific technology types. Initial discussions and analyses have led to the City's adoption of a minimum margin of procurement of 2% of its voluntary RPS procurement target of 75%, which equated to 1.5% of total retail sales. The difference between the City's chosen 75% renewable default service and the state mandated RPS percentage is the City's voluntary margin of procurement. The City believes that the MMoP and VMoP will provide adequate "cushion" in meeting applicable compliance mandates, should expected renewable energy deliveries fall short of projections.<sup>1</sup> This approach would provide the City with a significant surplus, relative to statewide mandates, virtually eliminating the possibility of compliance shortfalls. The City also acknowledges that such a margin could be evaluated and adjusted on an as-needed basis in consideration of the manner in which actual

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<sup>1</sup> See Section IX below for a more detailed explanation.



renewable energy purchases/deliveries track with related projections and also applicable statewide mandates, renewable product availability, budgetary impacts, participation in the City's opt-down service option and various other considerations.

Looking ahead to the balance of 2022<sup>+</sup> (as the City continues CCA implementation activities), the City and CalChoice are committed to administering renewable energy solicitations on an as-needed basis to ensure an appropriate level of both short- and long-term renewable energy commitments, the latter of which will be intended to facilitate compliance with California's 65% long-term contracting requirement, which became effective in 2021. Given the City's launch in October 2021, it is likely that initial renewable energy procurement activities will be administered according to the previously identified schedule. In considering its long-term renewable energy procurement obligations, the City acknowledges that certain new-build contracting opportunities, which typically entail long-term purchase commitments, may ~~need~~<sup>require</sup> substantial lead time before related renewable energy production occurs. Ensuring that renewable energy deliveries associated with such projects dovetail with the City's mandated RPS purchase~~anticipated needs~~ will require careful planning, selection of proven project developers and thoughtful consideration of ongoing renewable planning reserves to promote alignment of actual and projected renewable energy needs. Also related, the City expects that one or more of its initial long-term renewable energy contracts may need to utilize existing or soon-to-be-operational renewable generating facilities to ensure timely compliance with applicable long-term procurement requirements. With time, the City remains optimistic that it will be able to facilitate a certain level of new renewable infrastructure buildout through its ongoing renewable energy contracting efforts. Given the success of CalChoice's recent renewable energy solicitations and the City's relatively small retail electric load, the City is

confident in its ability to identify sufficient levels of renewable energy supply and will work diligently to secure such supply prior to launch and during ongoing operations, including the consideration of short- and long-term RPS volumes available via VAMO.

As part of its ongoing planning process, the City is also considering the manner in which renewable energy compliance risks will be assessed. ~~In particular, t~~The City has further considered this topic after submitting its Final 2021 RPS Procurement Plan and determined that an enhanced risk analysis would be instructive in assessing the sufficiency of its MMoP and other variables that could impact planned renewable energy deliveries. The results of this analysis are presented below, including a description of the methodology that was applied in completing such analysis. Based on the results of its analysis and previous guidance from CalChoice, the identification and selection of highly experienced and financially viable renewable energy sellers remains the single most important consideration in promoting the achievement of RPS compliance – by pursuing supply commitments from such sellers, including the specification of contract terms that narrow compliance risk (through firm, fixed delivery quantities or relatively high energy delivery guarantees, the City and CalChoice believe that the substantial majority of future delivery risk is avoided ~~continues to discuss this topic, gaining insight from CalChoice as well as other California CCA programs. Initial feedback suggests that successfully managing such risk is dependent upon the identification and selection of highly experienced and financially viable sellers during the administration of renewable energy solicitation processes. At this point, a quantitative assessment does not appear to be necessary as part of the City's initial/early stage risk management process but may become necessary in the future, depending upon the renewable energy procurement opportunities that happen to be identified.~~

~~This RPS Procurement Plan also addresses new requirements specified in the March 30, 2021 ACR, including a discussion related to the City's process for taking official positions on legislation as well as commentary focused on the impacts of local and regional policies related to the City's procurement targets, bid solicitation protocols, and forecasted supply.~~ This Draft RPS Procurement Plan also addresses new requirements specified in the April 11, 2022 ACR, including updates that reflect an extended planning period, through 2032, as well as recently completed risk assessment; the Draft Plan was also updated to some preliminary information regarding the City's intent to participate in the VAMO process.

### **III. Summary of Legislation Compliance**

This ~~Final 2021~~ RPS Procurement Plan addresses the requirements of all relevant legislation and the Commission's regulatory framework. This Section describes the relevant statutory and regulatory requirements and how this RPS Procurement Plan demonstrates that Santa Barbara will meet such requirements.

SB 350 (stats. 2015) was signed by the Governor on October 7, 2015. SB 350 set a new RPS procurement target of 50 percent by December 31, 2030. On December 20, 2016, the Commission issued Decision ("D.") 16-12-040, which partially implemented the increased targets of SB 350 by establishing new compliance periods and procurement quantity requirements. On July 5, 2017, the Commission issued D.17-06-026, which implemented some of the key remaining elements of SB 350, including adopting new minimum procurement requirements for long-term contracts and owned resources, as well as revising the excess procurement rules.

SB 100 was signed by the Governor on September 10, 2018 and became effective on January 1, 2019. SB 100 increased the RPS procurement requirements to 44 percent by

December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. On June 6, 2018, the Commission issued D.18-05-026, which implemented changes made by SB 350 to the RPS waiver process and reaffirmed the existing RPS penalty scheme. In July of 2018, the Commission instituted Rulemaking 18-07-003 to continue the implementation of the RPS. On May 28, 2019, the Commission issued a proposed decision that would continue to use a straight-line method to calculate compliance period procurement quantity requirements.

The current RPS procurement targets are incorporated into Santa Barbara's Renewable Net Short Calculation Table as described in Section VIII below and attached as Appendix C. Santa Barbara's planned procurement, as reflected in Santa Barbara's Renewable Net Short Calculation Table and described in Sections IV and V, is expected to be more than sufficient to exceed these targets, including a substantial margin of over-procurement based on Santa Barbara's intent to offer 75% renewable energy as its default retail service option. This approach serves as the City's most prominent risk mechanism in addressing prospective compliance shortfalls, as further described in Sections VII and IX. Santa Barbara also expects to meet California's SB 350 long-term procurement requirement, as described in Sections V and VII, through upcoming solicitation processes – as previously noted, the City is engaged in late-stage contract negotiations related to its first long-term RPS supply contract; contract execution is expected in early Q3 2021.

SB 901, signed by Governor Brown on September 21, 2018, added Public Utilities Code section 8388, which requires any IOU, publicly owned electric utility, or CCA with a biomass contract meeting certain requirements to seek to amend the contract to extend the expiration date to be five years later than the expiration date that was operative as of 2018. The City has yet to execute its first renewable energy supply agreement and, as such, does not have a contract with a

biomass facility that is covered by Public Utilities Code section 8388.

As a public agency, Santa Barbara takes official support positions on legislation through a formal vote of its governing council. Information on the City's official support positions, including a support letter if applicable, will be made available as part of the agenda packet related to the Council Meeting at which such vote occurs. The City may also post a press release regarding official positions on major legislation to the City's website. Because the City only takes support positions through the formal actions of its governing council, it cannot identify any future legislative efforts that it may support.

~~Further, the City is a member of the California Community Choice Association ("CalCCA"), which regularly takes formal support positions on legislation. However, a support position of CalCCA does not necessarily reflect the uniform support of every member of CalCCA, and thus should not be imputed to the individual members of CalCCA.~~

#### **IV. Assessment of RPS Portfolio Supplies and Demand**

##### **IV.A. Portfolio Supply and Demand**

The City commenced CCA service in October 2021. Santa Barbara's CCA Implementation Plan indicates the City's intent to serve approximately 34,000 service accounts, which are expected to consume about 290 gigawatt hours per year following the completion of all customer enrollment activities. Santa Barbara has commenced resource planning activities that will be necessary to provide for requisite quantities of renewable energy as well as other energy and capacity products (and services) during early-stage and ongoing program operations. Ongoing procurement efforts are expected to result in the execution of one or more renewable energy supply contracts that will contribute to Santa Barbara's achievement of RPS compliance mandates. Santa Barbara remains aware of pertinent elements reflected in California's RPS

Program, including long-term renewable energy contracting obligations, and intends to meet or exceed such requirements throughout its operating history. While its first long-term renewable supply contract is complete, Santa Barbara expects to pursue a variety of other renewable energy supply agreements (of various term lengths and structures) with the goal of assembling a diverse renewable contract portfolio. Exact portfolio characteristics may vary depending on direction received from Santa Barbara's governing council, renewable resource availability, procurement costs, legislative and policy changes, technological improvements, preferences of the community, or other developments, such as the procurement ordered in Mid-Term Reliability decision, D21-06-035. To manage this future uncertainty, Santa Barbara will regularly evaluate anticipated supply requirements in consideration of expected customer electricity usage and will structure its future procurement efforts to balance customer usage with requisite resource commitments. This examination of customer electricity usage and other market developments will help reduce costs and assist in meeting planned procurement for the period reflected in this ~~Final 2021~~ RPS Procurement Plan.

Santa Barbara is also attempting to gain an improved understanding of the prospective impacts to its customer base associated with the potential ~~upcoming~~ reopening of California's direct access market due to SB 237 (2018) and D.19-05-043. ~~In D.21-06-033, The City is aware of decision D.21-06-033 in which~~ the Commission recommended against expanding direct access at this point, however, t ~~The City recognizes that this may change in the future. The City and~~ will monitor direct access for any changes that may result in future adjustments to Santa Barbara's load forecast and related renewable energy procurement obligations, which would be expected to decrease if Santa Barbara loads migrate to direct access providers – in theory, such a change would push Santa Barbara's renewable energy content higher unless

surplus supply was sold to other market participants; this would be similar to the impacts experienced by California’s IOUs, which have resulted from ongoing CCA implementations and expansions – following these activities, the proportionate RPS content of each IOU has increased, as evidenced in the annual Power Source Disclosure Report of each IOU (for reference, this has occurred in spite of IOU-administered solicitations intended to sell off surplus RPS supply, which suggests that other retail sellers, particularly CCAs, have already made meaningful progress in meeting applicable RPS mandates in the near-term planning horizon). To the extent that any adjustments to the City’s retail sales forecast are made, it will reflect such adjustments in a subsequent RPS Procurement Plan. Through the ongoing evaluation of customer demand and other market developments, Santa Barbara hopes to influence reduced overall costs while meeting planned procurement objectives for the period addressed in this ~~Final 2021~~ RPS Procurement Plan.

Also, as COVID-19 cases generally decline and mobility restrictions continue to relax, the City will continue to monitor retail sales in the event that any meaningful deviations from historical norms happen to surface. The City will also monitor any changes that might arise from ongoing inflationary pressures and the implementation of higher interest rates that are being applied by the federal government to manage such inflation. Much like load-related impacts throughout the pandemic, the City understands that customer energy use within California’s current period of economic uncertainty (meaning, the “high inflation, rising interest rate” environment being experienced throughout the country) and the post-pandemic recovery period may be difficult to predict and easily obscured by typical variations in weather. ~~continue to decline and mobility restrictions relax, the City will closely monitor California’s planned mid-June “reopening” to determine the extent and pace at which retail electricity sales may~~

~~return to historical norms. Much like load-related impacts throughout the pandemic, the City understands that customer energy use during California’s reopening and general economic recovery will be difficult to predict while nominal increases seem inevitable, such changes could be easily obscured by typical variations in weather.~~ Following its launch and during early-stage operations, the City will closely evaluate available data, attempting to parse various impacts on retail electricity consumption while incorporating adjustments to its planning assumptions on an as-needed basis. Regardless of near-term load volatility, the City remains confident that its internally adopted MMoP, ~~minimum margin of procurement and voluntary margin of procurement~~ will virtually eliminate the potential for compliance deficits.

#### **IV.A.1. Voluntary Allocation and Market Offer (VAMO)**

The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a VAMO framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. LSEs will also be able to acquire resources through the VAMO structure that will be considered long-term contract resources.

The Commission recently approved D.22-06-024, which provided additional guidance on



the VAMO process, as well as Resolution No. E-5216, which approved the IOUs' pro forma contracts for the voluntary allocations. The IOUs have also filed advice letters outlining their market offer processes for resources not allocated through the voluntary allocations; approval for these processes is expected later this year.

The process for voluntary allocations is currently ongoing and is expected to be concluded in July 2022. The City is currently evaluating its needs, as well as available VAMO allocations for both long-term and short-term RPS energy and expects to finalize its choices in July 2022. At this time, the City is only prepared to indicate that it expects to accept certain quantities available via VAMO, but the extent to which available allocations will be accepted remains uncertain. As such, the City plans to file an update in August 2022, informing the Commission on the results of its participation in the VAMO process.

#### **IV.A.21. Portfolio Optimization**

The City's goal is to meet its locally adopted policies and statewide mandates in a manner that is both cost effective and supportive of a well-balanced resource portfolio. Portfolio optimization strategies can help reduce costs and should facilitate alignment of the City's portfolio of resources with its forecasted load needs. To support this goal, the City regularly considers the following strategies:

**Joint Solicitations:** Joint solicitations can expand the procurement opportunities available to a CCA, as well as potentially provide better contract terms. The City recently participated in the CalChoice, Desert Community Energy Authority and Clean Energy Alliance solicitation for Mid-Term Reliability (MTR) resources and - ~~administered solicitation for~~ long-term renewable energy supply and intends to continue participating in such joint solicitation activities as part of the shared services arrangement that it has in place with CalChoice. The City may also participate in additional joint solicitations through CalChoice with other CCAs.

**Purchases from Retail Sellers:** Purchases of RPS-eligible renewable energy (via resale) from other retail sellers can provide a cost-effective way of meeting short term resource needs or filling in gaps in procurement while long term projects are under development.

After commencing operations later this year, the City will evaluate solicitations offered by other retail sellers, as necessary.

**Sales Solicitations:** As the City’s portfolio of resources continues to develop, it will also consider offering solicitations of sales to other retail sellers, if the disposition of surplus is deemed desirable.

**Optimizing Existing Procurement:** As the City considers its long-term resource needs, it may evaluate options in its future power purchase agreements to increase the output of existing generating facilities through technological upgrades or by adding new capacity to an existing generator. Expanding existing facilities may provide additional generation at reduced costs with a lower risks of project failure because the need for distribution system upgrades and permitting may be reduced – such opportunities may be developed, as deemed appropriate by the City.

~~The Final Report of Working Group 3 Co-Chairs: Southern California Edison Company (U-338E) California Community Choice Association, and Commercial Energy (“Final Report”) was filed on February 21, 2020, in the Commission’s PCIA rulemaking (R.17-06-026). One of the Final Report’s key proposals was for the Commission to create a “Voluntary Allocation Market Offer” (“VAMO”) framework, where each LSE serving customers subject to the PCIA would be provided an annual option to receive an allocation (“Voluntary Allocation”) from the IOUs’ PCIA-eligible RPS energy portfolios, based on that LSE’s forecasted, vintaged, load share, and subject to certain conditions. Further, the Final Report proposed that any declined shares would be offered to LSEs through a market process (“Market Offer”). On May 20, 2021, the Commission adopted D.21-05-030, addressing the proposals in the Final Report. D.21-05-030 adopted the Final Report’s VAMO proposal, subject to certain limitations and additional requirements. To implement this modified VAMO structure, D.21-05-030 identifies various next steps, including a meet-and-confer process with the IOUs regarding the method for calculating potential Voluntary Allocations based on vintaged, annual load forecasts and a method for dividing the IOU’s RPS portfolios into shares. LSEs may also be able to acquire resources through the VAMO structure that will be considered long-term contract resources. As currently~~

~~scheduled, SCE will hold its voluntary enrollment period for VAMO resources during May 2022. At this early stage, the City is preliminarily reviewing its portfolio to determine whether and to what extent any Voluntary Allocation of RPS energy, both short term and long term allocations, or participation in IOU Market Offers would benefit its position. The City will provide an update on this topic in its next RPS Procurement Plan.~~

On June, 24 2021, the Commission adopted D.21-06-035, which directed all retail sellers to procure 11,500 MW of new net qualifying capacity (“NQC”) between 2023 and 2026 and assigned each retail seller a specific procurement responsibility based on its share of peak demand. The City’s total obligation is 13 MW, which must include minimum amounts of procurement from certain subcategories: (1) 3 MW from firm, zero-emitting capacity by 2025; (2) 1 MW from long duration storage resources by 2026; and (3) 1 MW from firm, non-fossil fueled baseload generating resources by 2026. The City is currently evaluating a range of procurement options for meeting its D.21-06-035 obligations. [This procurement was addressed through the request for proposals conducted jointly by CalChoice, Desert Community Energy Authority, and Clean Energy Alliance described elsewhere in this RPS Procurement Plan.](#) This includes participating in a CalChoice joint solicitation with Clean Energy Alliance and Desert Community Energy to procure additional resources to meet MTR Procurement requirements. The joint solicitation was issued January 4, 2022, with proposal due February 4, 2022. Options to be considered range from RA-only contracts to renewable generation, including that paired with storage and stand-alone storage contracts with various different energy structures. While RPS-eligible generation would provide an added benefit, it is not the primary objective or deciding factor in determining which procurement options will ultimately be selected. If the City does meet any of its D.21-06-035 procurement obligations with renewable generation, then that

generation may be in addition to the planning and forecasting described in this RPS Procurement Plan. The City will try to optimize its RPS procurement with the requirements from D.21-06-035 and will hopefully be able to harmonize these procurements to reduce costs, improve resource dispatchability (to better align renewable resource delivery profiles to the City's load profile) and avoid any need to over-procure resources.

#### **IV.B. Responsiveness to Local and Regional Policies**

##### **(i) Responsiveness to Policies of Santa Barbara's City Council**

Santa Barbara is a local governmental agency that is subject to the control of its governing council and is directly accountable to the community that it serves. Santa Barbara supports and is committed to meeting the state's GHG reduction and renewable procurement goals. Furthermore, and as noted elsewhere in this RPS Procurement Plan, the City has adopted a 75% renewable energy portfolio for its default CCA service offering. In addition to the noted quantity of renewable energy, the City intends to procure the balance of its projected energy requirements from carbon-free sources (providing customers receiving the default retail service offering with a 100% carbon-free resource mix), notably regionally produced hydroelectricity or Asset Controlling Supply. The City's renewable energy portfolio will be exclusively comprised of PCC1 product, which should provide the City with substantial renewable energy surplus relative to statewide procurement mandates. This anticipated portfolio composition will remain in effect for the first two years of CCA program operation after which the City intends to replace supplemental carbon-free energy (comprised of hydroelectricity or Asset Controlling Supply) with additional PCC1 supply, subject to product availability and budgetary impacts. The default CCA service offering was identified to support the City's commitment to increased renewable energy use and greenhouse gas emission reductions. It is worth noting that the City's CCA

customers are permitted to voluntarily “opt-down” to an alternative service option offering lower levels of renewable energy (and reduced rates, relative to the default service option), but previously conducted outreach efforts suggest that opt-down elections are expected to represent a very small proportion of the City’s customer base. As a result of the City’s internally adopted policy related to its CCA program’s supply portfolio, renewable energy planning and procurement assumptions have been adapted to support achievement of such objectives – the City’s Renewable Net Short template accordingly reflects a relatively large Voluntary Margin of Over-Procurement to support the City’s achievement of desired portfolio characteristics.

#### (ii) Responsiveness to Regional Policies

As noted in the previous sub-section, the City is overseen by its governing council, which also serves as the governing board/authority for its CCA program. As such, the policies adopted by the City’s governing council (related to CCA operations) serve as guiding directives for CCA operations, including the determination of renewable energy planning targets that are intended to support local policy preferences. Furthermore, the City has adopted an aspirational target of carbon neutrality by 2035, placing significant emphasis on vehicle and building electrification and leveraging the City’s carbon-free portfolio to reach its goals.

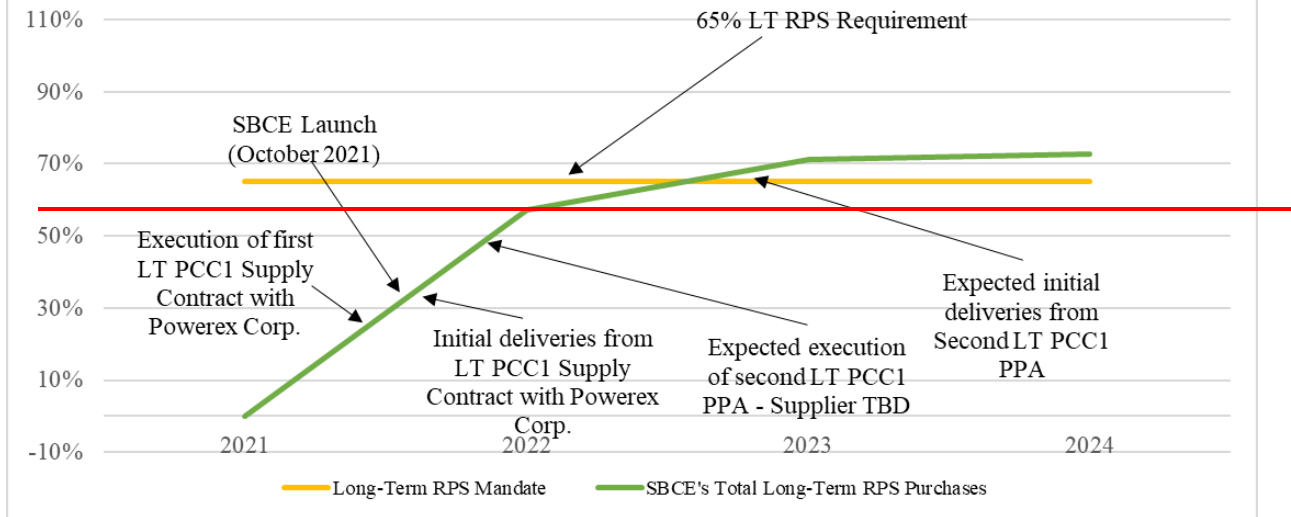
#### **IV.B.1. Long-term Procurement**

The City’s long-term renewable procurement efforts are underway with its first contract having recently been signed and deliveries commenced. Subsequent long-term contracting efforts will be required to meet applicable RPS mandates, and the City expects to regularly engage in jointly administered renewable solicitations via its association with CalChoice to achieve prescribed levels of long-term renewable procurement. The City anticipates the execution of multiple long-term supply agreements during the first few years of program

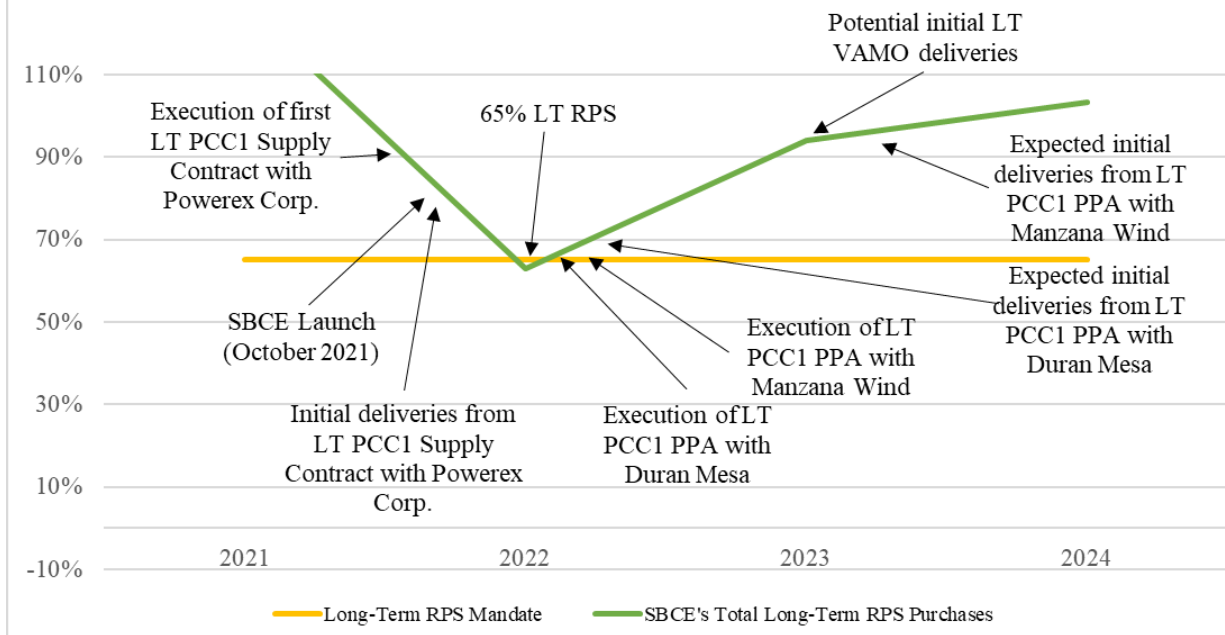
operations. Currently, the City expects to meet the 65% long term RPS contracting requirement later in 2022 after a second long-term RPS supply contract is signed and deliveries begin.

The City's schedule of procurement activities, which is subject to change, that will be necessary to promote early stage compliance with California's RPS Program, including requisite long-term contracting requirements included participation in a CalChoice solicitation which was released in the second quarter of 2021, with responses received on June 11, 2021. Unfortunately, these solicitation did not result in any new contracts. The City continues to work with CalChoice on additional solicitations for long term RPS resources. As previously mentioned, the City has signed a ten year agreement with Powerex that will provide an average of 50,000 MWh of long-term PCC1 products annually commencing in 2021. The following chart reflects the City's current and anticipated progress in meeting California's long-term RPS contracting mandate in Compliance Period 4 and beyond. [Note that this chart does not include the City's anticipated VAMO elections, which could meaningfully increase its long-term RPS positions beyond those reflected below.](#) Prospective contracts expected to result from the upcoming procurement process described below are marked as "second LT PCC1 PPA - Supplier TBD" in this chart.

## Santa Barbara Clean Energy Progress Towards Long-Term RPS Contracting Requirement



## Santa Barbara Clean Energy Progress Towards Long-Term RPS Contracting Requirement



To the extent currently on-going procurement processes are unsuccessful in securing necessary incremental long-term RPS supply, the City will expeditiously administer subsequent solicitations until such supply is satisfactorily addressed via contract commitments. The City understands that fulfilling upcoming long-term contracting requirements may be somewhat iterative and dependent upon the acceptance of available VAMO allocations as well as any offers that may be received through future solicitation processes (and related contracting successes). In the event that the City enters into another contract with a new-build renewable generating facility, it will closely monitor project development progress and contract/project performance to ensure that actual long-term deliveries meet or exceed pertinent requirements. Any future long-term contracting efforts, including the acceptance of any long-term VAMO allocations, will be described in subsequent RPS Procurement Plans.~~offers received during each successive solicitation process and related contracting success. The City is committed to fulfilling such long-term contracting requirements and will administer solicitations accordingly until this obligation is satisfied. Thereafter, the City will closely monitor project development progress (for new-build renewable projects) and contract/project performance to ensure that actual long-term deliveries meet or exceed pertinent requirements. Related progress of the City will be described in subsequent RPS Procurement Plans~~

#### **IV.C. Portfolio Diversity and Reliability**

In carrying out its planning functions, Santa Barbara has considered and will continue to ~~will also~~ consider the deliverability characteristics of its future generating resources placed under contract (such as the resource's dispatchability, available capacity, and typical production patterns) and will review the respective risks associated with short- and long-term purchases as



part of its forecasting and procurement processes. These efforts should lead to a more diverse resource mix, address grid integration issues, and provide value to the local community. A quantitative description of this forecast is attached to this ~~Final 2021~~ RPS Procurement Plan in Appendix C.

While the City is not opposed to considering emerging renewable generating technologies, it is unlikely that its initial supply agreement(s) will focus on such resources – the City has yet to receive credible and cost-competitive proposals from emerging renewable generating technologies, but if such proposals arrive in the future, they will be closely considered alongside other viable options. As a new CCA organization, the City’s initial renewable supply commitments must result in reliable, cost-effective supply to promote compliance with applicable RPS mandates without bearing the risks typically associated with newer technologies. Until compelling proposals for emerging renewable generating technologies are received, the City will likely exhibit preferences for “tried and true” generating technologies that will minimize delivery risk during early-stage operation while allowing for re-shaping of certain renewable generating profiles to better align supply with demand. while allowing for re-shaping of certain renewable generating profiles to better align supply with demand ~~If, however, a compelling offer is presented for a cost-effective emerging technology, the City will evaluate such proposal on its merits relative to other available offers.~~

The City will procure renewable and other requisite energy products, as necessary, to ensure that the future energy needs of its customers are met in a manner that promotes reliability and cost-effectiveness ~~reliable and cost-effective manner~~, consistent with applicable compliance mandates. The City, through its CCA Implementation Plan, has established initial procurement targets for requisite renewable energy supply, including subcategories for various

renewable energy products, and has also established targets for related planning reserves as described elsewhere in this document. To the extent that the City's energy needs are not fulfilled through the use of renewable generating resources, it should be assumed that such supply will be sourced from carbon-free and/or conventional energy resources, such as hydroelectric or natural gas generating technologies as well as system power purchases.

The City intends to utilize a portfolio risk management approach as part of its power purchasing program, seeking low-cost supply (based on then-current market conditions) as well as diversity amongst technologies, production profiles, project sizes and locations, counterparties, lengths of contract, and timing of market purchases. During early-stage renewable portfolio composition, it seems reasonable to assume that the City's initial supply portfolio may include a relatively small number of contracts which will grow in number over time, increasingly emphasizing the principles of resource and counterparty diversity as operational experience is gained and renewable energy requirements increase.

A key component of the City's early-stage planning process will relate to the analysis and consideration of expected load obligations with the objective of closely balancing supply/demand, cost/rate stability, and overall budgetary impacts. During pre-launch activities, this process primarily focuses on the compilation and analysis of historical customer data, as provided by SCE. Similar to most CCAs, the City expects that such historical data will not be a perfect predictor of future customer energy requirements, so it intends to actively monitor actual customer usage, relative to projections, over time, refining such forecasts as well as its ability to minimize variances between procured energy quantities and actual usage. ~~This will be particularly challenging in the evolving environment created by the COVID-19 pandemic.~~ ~~Nonetheless,~~ the City is committed to developing an accurate understanding of the manner in

which its customers use electric power to promote an efficient and cost-effective procurement process. The City also plans to maintain portfolio coverage targets of up to 100 percent (of expected customer energy requirements) in the near-term (0 to 2 years) but will likely leave larger open positions in the mid- to long-term, consistent with generally accepted industry practices.

As part of its developing an understanding of how its customers use electric power, the City ~~maintains~~~~is developing~~ load curves that reflect expected increases in load due to both transportation electrification and building electrification. Transportation electrification planning considers personal light duty vehicles, electrification of fleets and local targets for electrification of public transit systems. Contracting with a diverse set of renewable resources from different locations throughout California and the West will be necessary to accomplish the goal of aligning a renewable energy portfolio to LSE's load curves.

At this point in time, the City has no explicit preference for specific renewable generating technologies and will consider all responses to its solicitations with the goal of assembling a diversified renewable energy supply portfolio over time that will deliver energy in a profile that is generally consistent with the City's anticipated load shape. The City is also aware that use of intermittent renewable generating technologies has the potential to create occasional misalignments between customer energy consumption and related power production as well as the general quantity of renewable energy received from such projects. In order to better align the quantities of renewable energy with load, and help reduce variances between actual and expected quantities of renewable energy, the City is considering both stand-alone storage and hybrid or co-located storage and renewable energy projects.

#### **IV.D. Lessons Learned**

As a new CCA, Santa Barbara is gaining familiarity and experience with the information and processes that will be necessary to demonstrate compliance with the requirements of California's RPS Program. In communicating with and reviewing the RPS Procurement Plans of California's most mature CCA organizations as well as considering its own experiences in developing an RPS portfolio, the City observes that geographic diversity remains an important element in selecting renewable energy resources/contracting opportunities. The City observes,  
~~the City observes that Marin Clean Energy ("MCE") has highlighted the benefits of geographic diversity in constructing a renewable supply portfolio. MCE noted~~ that certain areas of the state have been overbuilt with renewable generating infrastructure, which has created challenges related to depressed market prices and increasing levels of resource curtailment. The City will keep this observation in mind when assembling its own renewable resource portfolio, avoiding overcommitment to resources within a narrowly defined geographic area. Based on communications with CalChoice and other CCAs, the City is also beginning to evaluate historical pricing trends, which have materially changed in the wake of increased renewable energy buildout. Due to these transitions and suppressed (and oftentimes negative) market pricing, the City will likely avoid contracting with generators located in certain areas or require substantial storage capacity (operated in parallel with renewable generating infrastructure) to mitigate market price risk when considering renewable generating resources located in such areas. The City appreciates the substantial financial risks that are created by California's long-term renewable contracting requirements and will continue to explore opportunities to manage such risks during its contracting efforts.

## **V. Project Development Status Update**

As described in Section IV.B above, Santa Barbara's planned procurement is expected to

be sufficient to meet both the applicable RPS procurement requirements as well as support the state's GHG reduction targets. Further, Santa Barbara's planned procurement is expected to support system reliability by considering both portfolio diversity and alignment with Santa Barbara customers' load curve.

Santa Barbara has complete its initial renewable energy contracting process, but the Powerex contract uses existing facilities so the City does not have any updates to report regarding project development status. As such, Santa Barbara has no information to include in the Project Development Status Update Report, Appendix D. As new information related to the City's renewable energy contracting process(es) becomes available, it will update its Project Development Status Update Report accordingly.

## **VI. Potential Compliance Delays**

As a new CCA organization, which has just begun customer service, Santa Barbara is actively engaged in the planning processes required to promote RPS compliance during early-stage and ongoing operation of its CCA program. Such efforts include communicating with CalChoice regarding ongoing planning and procurement associated with the operational and soon-to-be operational CCA programs that it supports and gaining helpful information regarding how such experiences may impacts the City's eventual procurement process(es). As the City did not commence CCA service until October 2021, no compliance delays will occur in Compliance Period 3, which includes calendar years 2017-2020, and none are expected in the current compliance period either (Compliance Period 4, including calendar years 2021-2024).

As a small CCA, the City recognizes that its portfolio of resources will be more limited than larger LSEs and that delays in online dates and reduced generation from the RPS contracts may have significant impacts on both its level of RPS and its progress to achieving 65% from

long term contracts. The City has discussed this topic with CalChoice, which continues to manage such risk through the screening and evaluative processes associated with its renewable energy solicitations. In particular, a key element of proposal evaluation focuses on the identification and selection of highly experienced and financially viable renewable energy sellers – by pursuing supply commitments from such sellers, the City and CalChoice believe that the substantial majority of future delivery risk is avoided. This will be accomplished by completing a rigorous review of each prospective supplier’s development and operational experience, track record of success (in terms of developing and/or operating renewable energy projects), financial standing and credit rating, familiarity with pertinent development milestones as well as the state of completion for such items, customer references and various other considerations. During the completion of this process, the field of respondents will be significantly narrowed, leaving only the best qualified suppliers to undergo further consideration. The results of this process have led CalChoice, in cooperation with the City, to determine that further quantitative risk assessments have not been necessary thus far. In the future however, based on evolving market conditions, supplier interest or other circumstances, the City and CalChoice could determine that completion of quantitative risk assessments may be necessary and appropriate, depending upon the renewable energy procurement opportunities that happen to be pursued. [The City is also considering the extent to which it may accept long-term allocations available under the VAMO process, which would augment existing long-term RPS positions.](#)

If a future compliance issue is identified or the City encounters challenges in securing requisite renewable energy supply in the future, then Santa Barbara will address such issue within a subsequent RPS Procurement Plan.

#### **~~VI.1. Impacts of COVID-19 Pandemic~~**

~~The City is keenly aware of the current, worldwide COVID-19 pandemic, and its impact on “business as usual”, including impacts to requisite resource planning activities and, in particular, renewable energy procurement.~~ As the Commission is aware, successful renewable energy markets depend upon international supply chains, substantial labor commitments, robust financial markets, timely interactions with governmental planning authorities and various other considerations. With numerous disruptions caused by the [COVID-19 pandemic and various other challenges](#)~~current pandemic~~, it is incredibly challenging to determine if, and to what extent, renewable energy procurement opportunities may be compromised, particularly new-build renewable energy projects which typically rely on long-term contracts as the basis for project financing. [The City will closely monitor energy usage patterns to determine if any planning adjustments may be necessary based on the current and expected economic conditions](#)~~The City also understands that many CCAs, including the currently operational CCAs supported by CalChoice, have observed moderate to significant net retail sales reductions resulting from the pandemic, but with California’s “reopening” scheduled to occur in mid-June, the City will closely monitor energy usage patterns leading up to its launch to determine if any planning adjustments may be necessary—a certain level of economic recovery is expected to occur, but understanding upcoming changes will require diligent monitoring of available data. Businesses that previously closed may reopen and usage patterns may shift (away from the residential sector and towards the commercial sector, as businesses reopen and/or return to normal operations).—The timing and extent of recovery is generally unknown and the subject of considerable speculation.~~

The City intends to closely monitor this situation as well as potential fallout related to supplier/developer effectiveness in fulfilling mandated renewable energy needs, project

completion and overall supplier viability – the City is aware that many supply chains have been disrupted during the pandemic with a variety of material/component shortages occurring throughout the industry; recent concerns regarding the application of tariffs on certain imported renewable infrastructure have also provoked certain supplier to request “reopening” of previously executed contracts and/or the negotiation of terms that allow for price adjustments in the event of unexpected costs (such as the noted tariff). While the tariff issue seems to be temporarily resolved, concerns of this nature have introduced a measure of instability in the long-term contracting efforts of many retail sellers. With these concerns in mind, ~~It seems reasonable to anticipate consequences, and~~ the City encourages the Commission to closely monitor and potentially reconsider certain elements of the RPS Program as this situation evolves, particularly if there are widespread, well-documented challenges as California retail sellers attempt to fulfill pertinent procurement requirements. Related, the City is aware of numerous instances in which contract documents are being drafted with more expansive force majeure language to alleviate the concerns of sellers/developers in meeting project completion schedules due to potential pandemic-related delays – “day for day” commercial operation date extensions have been pursued, creating flexibility in achieving commercial operation date targets based on the duration of shelter-in-place directives. From the City’s perspective, which is informed by guidance provided via CalChoice, buyers must be diligent in contracting efforts to strike an appropriate balance between flexibility and certainty – not all project development delays are expected to be directly attributable to the pandemic, so effectively parsing contractual accommodations (for development delays) in consideration of this reality should serve to manage uncertainties related to project completion and renewable delivery timelines.

The City also encourages the Commission to coordinate closely with the Legislature to



evaluate potential adaptations to the RPS Program, which may become necessary if renewable energy markets are materially impacted by the pandemic. With rapidly changing circumstances and related information, the City anticipates the need for considerable flexibility/agility in working to meet requisite renewable energy procurement mandates. In the meantime, the City will remain hopeful that impacts to renewable energy markets will not compromise California's ability to reach its renewable energy procurement goals or its own, internally established renewable procurement targets.

## **VII. Risk Assessment**

The City will make reasonable efforts to minimize the risk of renewable procurement shortfalls for purposes of complying with applicable RPS mandates established in SB 100, but it cannot definitively predict the scope or magnitude of circumstances that may impact annual retail energy sales, renewable energy markets or individual project performance. With this in mind, the City will responsibly assess RPS compliance risk by considering three key planning elements: 1) retail sales variability; 2) renewable energy production/delivery variability; and 3) impacts to overall system reliability associated with the City's planned RPS purchases and other influences. These topics will be generally considered in the noted sequence with observed risks informing potential adaptations to the City's planning process, potential adaptations to planning reserves and, ultimately, refinements to the City's renewable energy procurement (or sales) processes and quantities. As described elsewhere in this ~~Final 2021~~ RPS Procurement Plan and in consideration of City-adopted RPS planning targets, the City expects to be well-positioned to meet its RPS compliance requirements in Compliance Period 4 (and beyond). Therefore, the City's self-determined risk of non-compliance is low. Nevertheless, the City will continue to assess demand-side and supply-side risks to better understand potential areas of concern and to

promote achievement of organizational compliance objectives.

Regarding demand-side risk, the City continues to evaluate and update prospective retail sales related to its upcoming customer enrollment process and the trailing 10-year planning period, including but not limited to anticipated changes related to customer eligibility, new development projects (that could increase retail energy consumption) and business closures, expected customer attrition (or growth) and changes to behind-the-meter generating capacity. From a practical perspective, the greatest demand-side risk with regard to the City's anticipated customer base is that retail sales are meaningfully higher than anticipated during Compliance Period 4. As the Commission is aware, CCAs provide an opportunity for customer choice, allowing customers to voluntarily participate in the City's program or remain bundled customers of the incumbent utility, SCE. To the extent that customers choose to leave the City's CCA program, or "opt out", the City's retail sales will decrease, resulting in related increases to the ratio of renewable energy serving such customers (and improving the City's position relative to applicable RPS compliance mandates ~~and voluntarily adopted planning goals, which meaningfully exceed applicable mandates~~) – it is unlikely that the City's renewable supply commitments will provide volumetric flexibility/options in the event of higher-than-anticipated retail sales volumes; in such instances, the City would need to pursue additional procurement opportunities to address unanticipated open positions. Because the City's anticipated participation rates are based on the well-documented experiences of California's other operational CCA programs, the organization is confident that actual retail sales will be reasonably well aligned with related forecasts. To the extent that participation in the City's opt-down (50% renewable) voluntary service option is higher than anticipated, the City would be expected to have additional RPS length (and could need to dispose of such length via surplus

renewable energy sales, if the City deemed such an approach necessary to avoid higher-than-necessary RPS procurement).

Considering the City's ongoing coordination with its planning departments, the City expects to be well informed regarding upcoming development projects or other customer changes that could materially increase retail sales. For this reason, the City believes that demand-side RPS compliance risk is low.

Regarding supply-side risks, the City is aware of the generation variability/intermittency associated with certain renewable technologies as well as the possibility of curtailment (based on pricing considerations or market directives) during certain times of day/year. In the case of new-build renewable projects, the City is also aware of the possibility of project delays and, potentially, project failure. Such circumstances can materially diminish renewable energy deliveries, jeopardizing the achievement of RPS compliance and exposing the CCA program to unexpected financial consequences, if such circumstances impact larger (or multiple) supply sources. Based on the City's 75% renewable default service offering and a diversified procurement approach that is expected to utilize numerous sources of RPS supply, it is unlikely that one or more project delays or failures would jeopardize achievement of RPS compliance.

CCAs are exposed to considerable compliance risk at the time of, and in the few years immediately following, program launch, as load variability is generally highest during this period of time and organizational creditworthiness is generally weakest (due to the considerable costs associated with CCA implementation, the timing related to program expenditures and revenue receipts, and the methodical pace at which financial reserves are typically accrued during early-stage operations). To the best of the City's knowledge, few early-stage CCAs have experienced difficulties with generalized renewable energy procurement, but long-term RPS contracting has

been more challenging – typical lead times (between contract execution and project completion) associated with new-build renewable energy projects are often 2-3 years or longer, and related power supply contracting efforts are rarely initiated so far in advance of service commencement. With this observation in mind, early-stage CCAs must either: 1) focus RPS contracting efforts on existing renewable generating resources; or 2) accept failure/delay risks associated with new-build renewable projects placed under contract near the time of CCA launch by incorporating reasonable planning reserves to mitigate such risks. In the case of the City, a balanced approach has been ~~will be~~ pursued, which will focus on contracting efforts with both new and existing renewable generating resources, thereby minimizing, but not eliminating, risks associated with compliance shortfalls. The City’s anticipated long-term contracting surplus during Compliance Period 4 should further mitigate concerns related to project development delays and or failures, as such planning reserve is expected to accommodate one or more project failures amongst the City’s upcoming contracting opportunities. ~~After such contracting efforts are complete, the City will incorporate the results of its contract-specific risk assessment by entering related volumetric risk adjustments within a future quantitative assessment (to be provided as part of the RPS planning process).~~

The City also anticipates mitigating supply-side risk by incorporating fixed-volume and index-plus pricing structures amongst its portfolio of RPS supply agreements. These procurement mechanisms serve to mitigate the risk of delivery variability (typically associated with intermittent renewable resources and/or renewable resources that may be subject to periodic curtailment) and exposure to negative market pricing (which could prompt economic curtailment). Fixed volume arrangements, in particular, also mitigate risk associated with commercial operation delays and facility failure; these structures also provide buyers with

financial protections (via penalty payments) for under-delivery (which could be used, as a last resort, to offset compliance penalties in the event that the supplier or the City are unable to identify replacement volumes).

As part of the City's approach to managing supply-side risk (which will be carried out through its relationship with CalChoice), it has also adopted what it believes to be a CCA best practice related to RPS contracting: structuring early-stage solicitations to identify proven renewable generating technologies in prime resource locations to be developed and/or operated by the most experienced available suppliers (with strong, well-documented track records of successful project completion and operational reliability). Unlike certain of the IOU's early-stage contracting efforts, which focused on experimental/unproven renewable generating technologies, CCAs have generally focused early-stage contracting efforts on tried-and-true technologies and highly experienced counterparties – the City intends to follow this practice as well. This noted, there is always a possibility that future renewable energy supply will not be delivered as required, which is why the City intends to evaluate the sufficiency of currently anticipated renewable energy procurement targets in meeting both statutory mandates and prudent planning reserve levels – as previously noted, the City has both a minimum margin of procurement and a voluntary margin of procurement due to the 75% renewable energy default retail service option. It is expected that these two procurement margins substantially eliminate compliance-related concerns, as the level of renewable energy to be procured by the City (exclusively purchased from bundled renewable energy sources) will significantly exceed statewide procurement mandates.

The City has compiled information about curtailments of renewable energy in CAISO over the last four years. This information is presented below. The data shows that renewable

curtailment has been consistently under 1% of load. [The City also analyzed the occurrence of negative prices within the SP-15 area of the CAISO. These studies, combined with the analysis of other risk discussed below](#), ~~which~~ indicates that the 2% minimum margin of procurement, equivalent to 1.5% of load, adopted by the City should be sufficient, ~~allowing for additional variability in supply~~. These past results are obviously not indicative of what might occur in the future, and indeed the data shows that the trend of renewable curtailment has generally been increasing. However, the City has considered recent and expected developments in energy markets and believes that increases in curtailments [and negative prices](#) should not continue growing as seen in the last few years. There are several reasons for this. First, the amount of storage available on the CAISO system, much of it tied directly to renewable resources, has grown dramatically over the last year and is expected to continue this explosive growth over the next few years. The growth of storage should provide a sink for large amounts of renewable energy that might today be curtailed, [especially since much of the storage is co-located with the renewable energy](#). Exports of energy from the CAISO during periods of low prices when renewable curtailment would likely occur have also been increasing as the rest of the west begins to recognize the benefits to using this cheap energy from California when it is available. In addition to storage and exports, expected increases in transportation and building electrification will likely increase demand and also provide a sink for the rapidly increasing amounts of renewable energy. The changes brought about by climate change may also reduce the curtailment of renewable resources. This can be seen in the reduction in curtailments that occurred in 2021 which was at least partially due to the reduction in hydro generation due to the ongoing drought. As temperatures in California increase it is expected that annual snowpacks will decrease reducing the amounts of hydro generation. Additional, climate change is expected to increase the

volatility of weather, likely leading to more years with low hydro generation in the future.

The City has recently attempted to quantify the energy impacts of such supply side losses into three main categories: 1) curtailment risk; 2) counterparty risk; and 3) project cancellation risk. These risks, as previously discussed, pose the greatest impacts to the delivery of RPS energy. In addition to the historical curtailment analyses already discussed (and further elaborated on below), the City has examined forwarding looking data concerning curtailment risk as the likelihood the market forward curves are below -\$15/MWh on an annual basis from the year 2022 to the end of the contract's life. Below this dollar amount, the City is likely better off financially curtailing the unit and purchasing additional renewable energy credits on the secondary market. The figures presented in the column quantifying curtailment risk are calculated by taking the energy delivered to market and multiplying it by the likelihood of curtailment. Counterparty risk is the risk posed by a counterparty being unable or unwilling to honor their total RPS delivery obligations, as reflected in related contract documents. The City quantifies this likelihood by considering S&P Global's, Global Corporate Annual Default Rates by Rating Category (%) as a measure of organizational viability and financial stability. While this rate considers industries beyond the energy sector, it provides solid insights into the correlation and potential impacts of dealing with uncreditworthy counterparties. The likelihood of default by credit rating was averaged over the years from 2014 to 2019. These years were chosen to remove irregularities in default rates during the COVID-19 pandemic. If a counterparty was found to be unrated, then the contract was reviewed to identify specified credit assurances; based on such assurances, an approximate rating was derived based on experience and risk tolerance. The final category reflected in the City's analysis is project/contract cancellation risk. This category is distinct from the counterparty risk category because the risk of project/contract

cancellation may only affect a single project under a counterparty's portfolio. Projects may be cancelled for a variety of reasons, but in today's market economy, deals struck several months to a year ago may no longer be economic for the seller. It was assumed this risk only effects single source projects, which have yet to be constructed. These projects were chosen because they have a single point of failure unlike RPS energy purchased from a pool of resources (under a portfolio-style purchase agreement in which there is generally more diversity amongst the sources of supply). Based on discussions with various counterparties and its industry knowledge, the City will assume this risk effects 1 in 20 deals. Considering these categories holistically, the City is able to derive a cumulative energy percentage at risk. To add to the City's conservative tolerance for risk, a top-level risk of non-delivery offset at 0.25% of renewable energy procurements will be added to the calculated energy at risk percentage. This adder will help to express risks the City cannot foresee and help to better guarantee full compliance through the assumption of lower than expected RPS deliveries (which will necessitate higher levels of RPS procurement, via renewable energy planning reserves). The percentage of renewable energy and error is the percentage of total renewable energy procured, while the percentage of retail load is the energy at risk as a percentage of retail load. These "at risk" percentages reflect possible losses which, through no fault of the City, may occur by virtue of being a market participant. These losses pose a risk for non-compliance relative to the City's RPS goals and targets. Since this number is not a guaranteed loss, the City will implement the previously mentioned mitigation strategies to give the greatest chance of full market delivery and compliance.



ID	Contract	RPS Contract ID	Energy	Delivery & Market Risks		
			Energy to be Delivered to Market (MWh)	Curtailment Risk (MWh)	Counterparty Risk (MWh)	Project Cancellation Risk (MWh)
1	Contract 3038	0	500,000	-	-	-
2	Contract 3510	0	125,000	-	2,403	-
3	Contract 3755	0	831,516	-	15,982	-
4	Contract 3763	0	294,834	-	5,667	-
<b>Total</b>			<b>1,751,350</b>	<b>-</b>	<b>24,051</b>	<b>-</b>

#### Energy

<b>Total Renewable Energy</b>	<b>1,751,350</b>
<b>Total Renewable Energy at Risk</b>	<b>24,051</b>
<b>Pct of Renewable Energy at Risk</b>	<b>1.37%</b>
<b>Pct of Unknown Error at Risk</b>	<b>0.25%</b>
<b>Pct of Renewable Energy &amp; Error at Risk</b>	<b>1.62%</b>
<b>Pct of Retail Load</b>	<b>0.71%</b>

[As previously mentioned, the City has also analyzed historical data on curtailments in the CAISO energy markets.](#)

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above as to why curtailments are not expected to increase as they have over the past few years also informs expectations of negative prices. As explained elsewhere in this document, the City will take steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources.

Annual Curtailments (MWh)			
		Wind	Solar
2018		28,686	432,357
2019		43,557	921,684

2020		90,276	1,497,220
2021		78,477	1,426,326
<b>Annual Curtailment (% of specific generation)</b>			
2018		0.17%	1.56%
2019		0.27%	3.22%
2020		0.56%	4.99%
2021		0.41%	4.19%
<b>Annual Curtailment (% of Load)</b>			
2018		0.013%	0.191%
2019		0.020%	0.420%
2020		0.041%	0.683%
2021		0.036%	0.647%

The City has also analyzed negative prices in the CAISO, as these can greatly affect the siting and operation of CCA owned and contracted assets. The City has endeavored to quantify the occurrence of such events to help limit their financial and regulatory impact. With limited means of forecasting such events, the City has assembled this additional historic analysis with the average results being used in the City's forecasting assumptions for curtailment events.

Below are several charts which illustrate the number of historic curtailment events. The City defines a curtailment event as the times the location marginal price (LMP) drops below negative \$15/MWh. It is assumed below this price it is financially prudent to curtail a renewable generators energy production and procure renewable energy credits (RECs) on the secondary market. Estimates for the real-time market (RTM) have been averaged over the hour, so only the average price is evaluated.

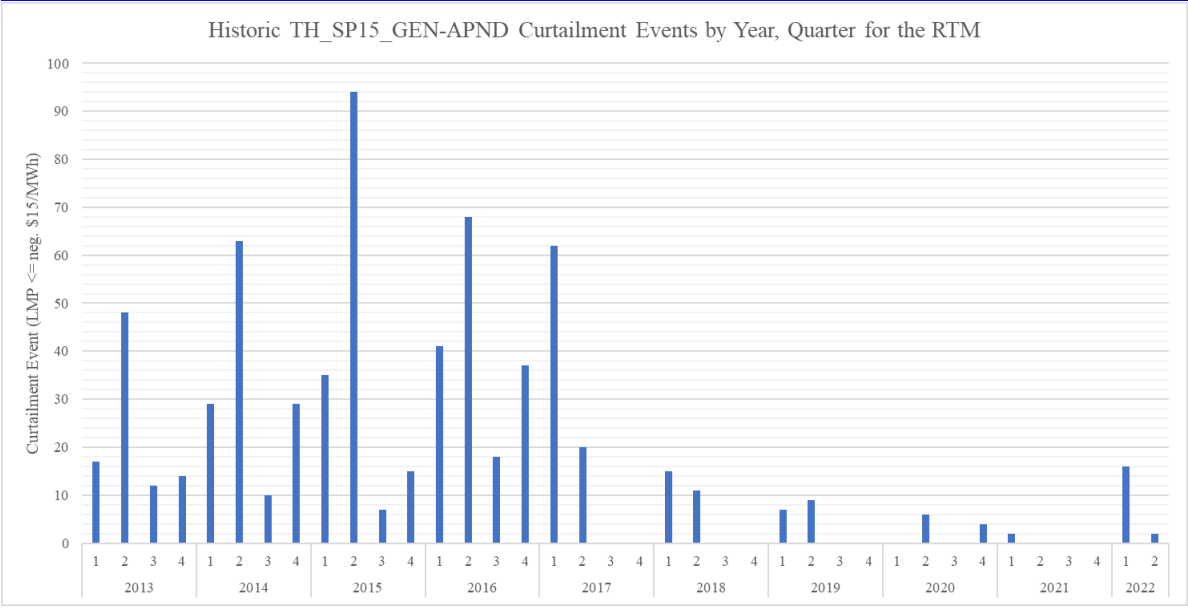
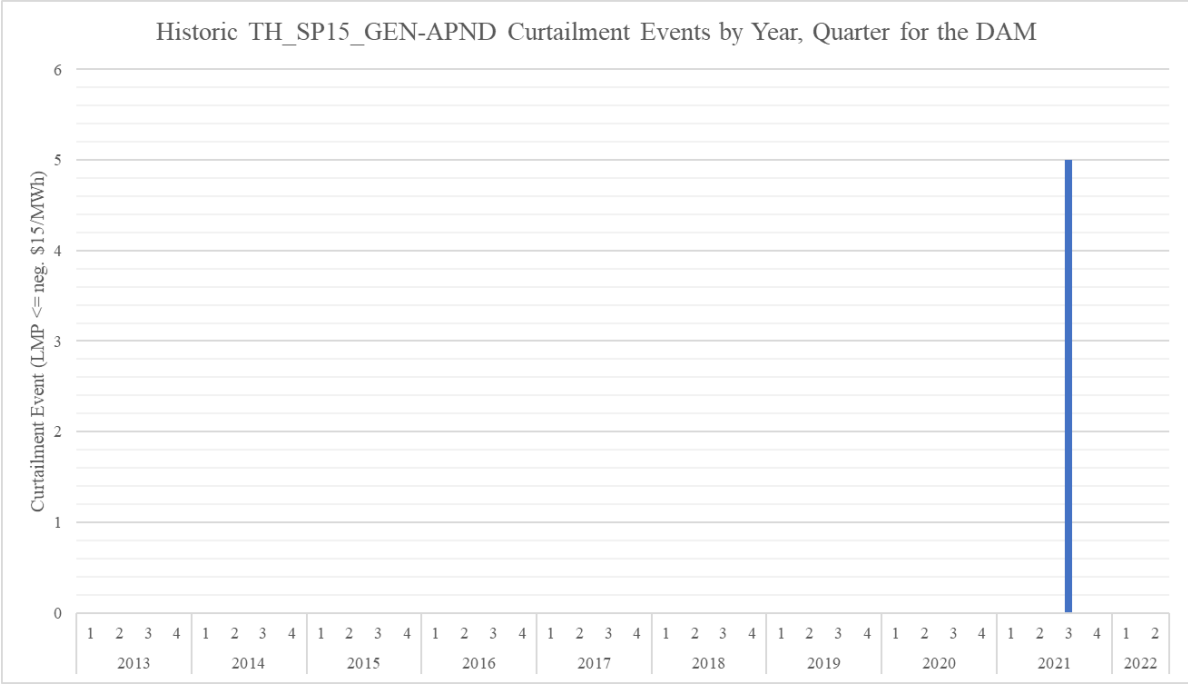


Table: SP15 DAM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
14	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
18	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
23	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total Quarter	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0
Total Year	0				0				0				0				0				0				0				0				5				0	

Table: SP15 RTM Curtailment Events by Year, Quarter, &amp; Hour

	2013				2014				2015				2016				2017				2018				2019				2020				2021				2022	
	Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter				Quarter	
Hour	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2
1	0	1	0	0	1	0	0	4	1	2	0	1	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2	0	4	1	1	1	2	1	3	1	0	0	3	0	2	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
3	0	9	4	3	3	7	0	3	4	3	0	0	1	2	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4	0	5	2	0	7	9	2	3	2	6	0	0	0	4	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2	7	1	1	1	4	1	2	1	1	1	0	1	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	4	3	1	0	0	1	0	1	0	1	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2	2	1	0	0	4	1	0	0	1	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8	0	1	0	0	0	2	2	0	0	0	3	1	0	0	3	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9	2	5	0	1	0	5	1	0	4	12	1	1	3	5	4	2	5	4	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
10	0	6	1	2	3	7	1	1	2	8	3	3	2	9	5	6	10	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0
11	2	1	1	2	4	8	1	3	3	5	1	1	3	11	4	5	7	1	0	0	1	2	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1	0
12	1	0	0	1	2	3	0	4	2	6	0	2	4	3	2	10	5	2	0	0	1	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	1	1
13	0	1	0	1	2	1	0	2	2	4	0	2	4	3	1	3	2	1	0	0	1	1	0	0	1	1	0	0	0	1	0	1	0	0	0	0	3	0
14	1	0	0	1	2	1	0	0	2	6	0	1	4	6	1	6	5	2	0	0	2	0	0	0	4	1	0	0	0	1	0	1	1	0	0	0	3	1
15	1	2	0	1	1	3	0	1	2	6	0	2	5	7	1	4	7	2	0	0	3	1	0	0	1	2	0	0	0	1	0	0	1	0	0	0	3	0
16	0	0	0	0	1	3	0	1	4	7	0	1	5	7	0	1	8	2	0	0	3	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	0	
17	0	0	0	0	1	2	0	0	1	9	0	0	4	3	0	0	2	2	0	0	4	1	0	0	0	2	0	0	0	0	0	0	0	0	0	2	0	
18	0	0	0	0	0	1	0	0	0	7	7	0	2	1	0	0	2	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	
19	1	0	0	0	0	0	0	0	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
20	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
21	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
23	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
24	0	1	0	0	0	0	0	0	1	3	0	1	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total Quarter	17	48	12	14	29	63	10	29	35	94	7	15	41	68	18	37	62	20	0	0	15	11	0	0	7	9	0	0	0	6	0	4	2	0	0	0	16	2
Total Year	91				131				151				164				82				26				16				10				2				18	

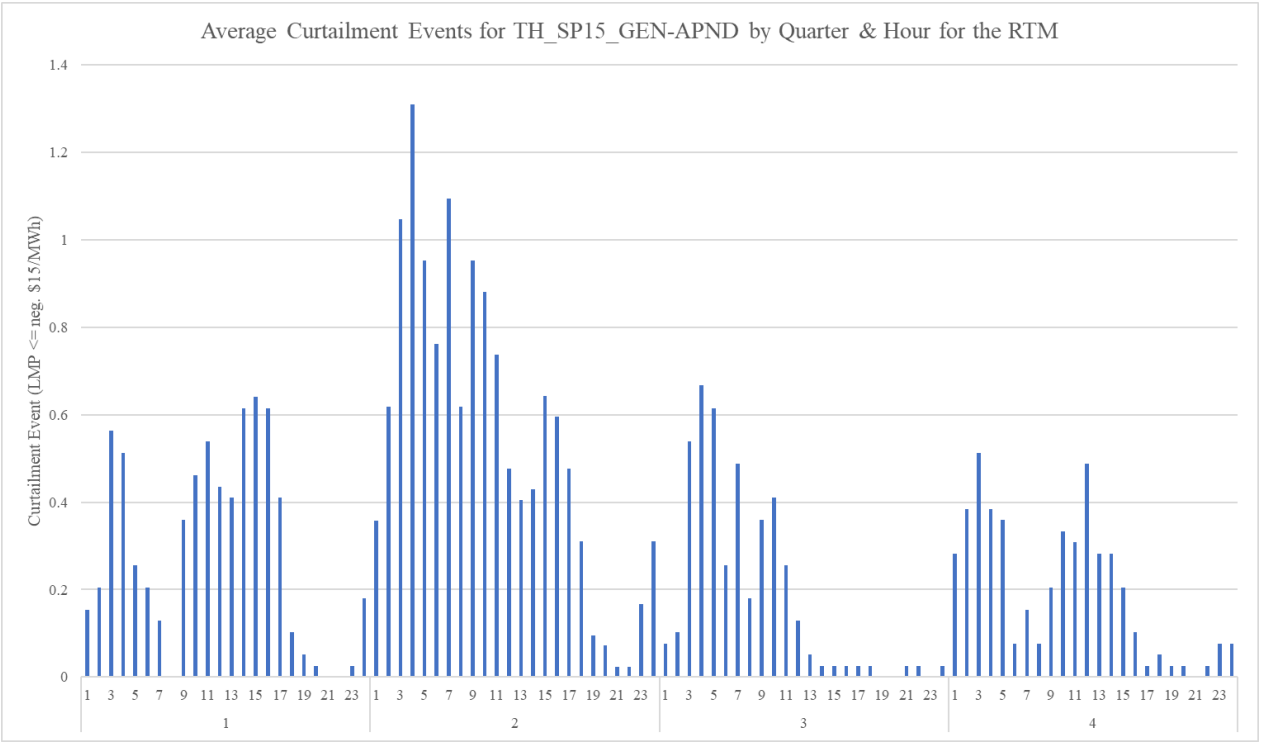
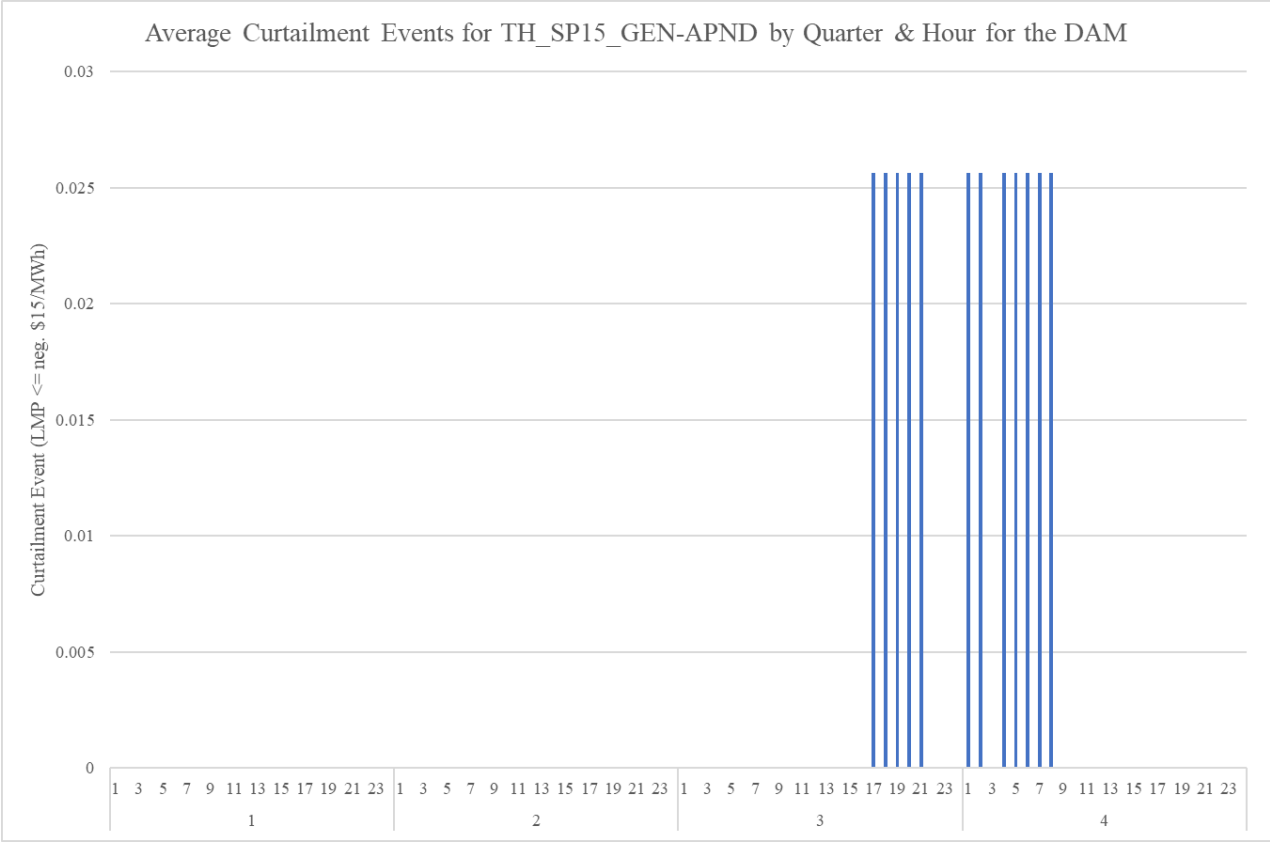


Table: TH\_SP15\_GEN-APND Average DAM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.00	0.00	0.00	0.03
2	0.00	0.00	0.00	0.03
3	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.03
5	0.00	0.00	0.00	0.03
6	0.00	0.00	0.00	0.03
7	0.00	0.00	0.00	0.03
8	0.00	0.00	0.00	0.03
9	0.00	0.00	0.00	0.00
10	0.00	0.00	0.00	0.00
11	0.00	0.00	0.00	0.00
12	0.00	0.00	0.00	0.00
13	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00
15	0.00	0.00	0.00	0.00
16	0.00	0.00	0.00	0.00
17	0.00	0.00	0.03	0.00
18	0.00	0.00	0.03	0.00
19	0.00	0.00	0.03	0.00
20	0.00	0.00	0.03	0.00
21	0.00	0.00	0.03	0.00
22	0.00	0.00	0.00	0.00
23	0.00	0.00	0.00	0.00
24	0.00	0.00	0.00	0.00
<b>Total Quarter</b>	0.00	0.00	0.01	0.01
<b>Total Year</b>	0.01			

Table: TH\_SP15\_GEN-APND Average RTM  
Hourly Curtailment Event Forecast

Hour	Quarter			
	1	2	3	4
1	0.15	0.36	0.08	0.28
2	0.21	0.62	0.10	0.38
3	0.56	1.05	0.54	0.51
4	0.51	1.31	0.67	0.38
5	0.26	0.95	0.62	0.36
6	0.21	0.76	0.26	0.08
7	0.13	1.10	0.49	0.15
8	0.00	0.62	0.18	0.08
9	0.36	0.95	0.36	0.21
10	0.46	0.88	0.41	0.33
11	0.54	0.74	0.26	0.31
12	0.44	0.48	0.13	0.49
13	0.41	0.40	0.05	0.28
14	0.62	0.43	0.03	0.28
15	0.64	0.64	0.03	0.21
16	0.62	0.60	0.03	0.10
17	0.41	0.48	0.03	0.03
18	0.10	0.31	0.03	0.05
19	0.05	0.10	0.00	0.03
20	0.03	0.07	0.00	0.03
21	0.00	0.02	0.03	0.00
22	0.00	0.02	0.03	0.03
23	0.03	0.17	0.00	0.08
24	0.18	0.31	0.03	0.08
<b>Total Quarter</b>	0.29	0.56	0.18	0.20
<b>Total Year</b>	1.22			

After examining the [historical CAISO curtailment data, its risk analysis, and the analysis of negative pricing and curtailments data](#), the City remains confident that the 2% minimum margin of procurement that it has institute provides the correct balance between risk management and excessive costs. The Town will continue to monitor trends in the energy market, especially the curtailment levels of renewable resources, and if necessary will adjust the minimum margin of procurement. Furthermore, The City has minimal exposure to delivery shortfalls related to project failure or delays due to the fact that all of its currently contracted projects are already online.

Following contract execution, the City staff will closely coordinate with its suppliers,

particularly developers of any new-build resource, to maintain an acute awareness of project development progress, including any anticipated issues that could delay expected initial deliveries or compromise overall project viability. Such communications are intended to provide the City with an early indication of such issues, which would allow “corrective procurement actions” to occur if the extent of such issues were determined to impact the City’s RPS compliance status.

In terms of system and resource reliability, the City will utilize a procurement approach that intends to emphasize resource and contractual diversity. This process is expected to contribute to the identification of renewable generating resources that should positively impact system reliability over time.

While other CCA programs may choose to pursue differing minimum margins of procurement, the City observes that there does not seem to be a clear standard or related guidelines for setting such metrics. As such, the City has considered core objectives of its CCA program when tentatively establishing this metric, including compliance with pertinent regulatory mandates, specifically California’s RPS Program. When considering the perceived sufficiency of the City’s current minimum margin of procurement, it is also important to acknowledge the potential impacts on future retail sales imposed by the pandemic. Based on information provided by CalChoice and other CCA programs throughout the state, the City understands that there have been significant load reductions caused by current economic conditions. For renewable energy planning purposes, the City has yet to adapt its retail sales forecast to reflect such changes. Recent significant increases in inflation, and increases in interest rates to combat such inflation, are expected to slow the growth of the economy over the next few years. To the extent that that occurs~~the pandemic (a 5-10% reduction appears to be a typical load impact relative to pre-pandemic electric energy usage; actual impacts tend to~~

~~vary by community in consideration of customer composition and other factors), but the extent to which such load reductions persist over time remains uncertain, particularly with California's reopening scheduled to occur in mid-June 2021. For renewable energy planning purposes, the City has yet to adapt (reduce) its retail sales forecast to reflect such changes, which may endure well into the future—this situation will be monitored over time with forecasting adjustments incorporated, if necessary, closer to the City's expected launch. To the extent that economic recovery is relatively slow~~ and retail sales fall below expectations during CCA launch and early-stage operations, the City is expected to accrue actual renewable energy volumes in excess of its planning targets (including reserves) and may have a margin of over-procurement that is higher than previously noted. Electric load within the City will be monitored during the period leading up to its launch to determine if related planning and procurement adjustments may be needed to protect the City from higher-than-anticipated renewable energy costs and related impacts to customer rates.

Santa Barbara is aware that Section 399.13(a)(6)(A), and the ACR, note that generation variability and resource availability may impact the amount of future electricity delivered. As previously discussed, Santa Barbara ~~will~~ considers this potential risk during its resource planning process and related procurement/contracting efforts. The City may pursue contract structures that promote volumetric stability through the application of firm delivery quantities and/or performance guarantees that provide financial remedies/penalties in the event of delivery shortfalls. If necessary, the application of such penalties could be used to: 1) as a first priority, procure additional renewable energy supply to address delivery shortfalls; or 2) in the event of a determination of non-compliance, offset the cost of related penalties. The City's intent is to achieve and maintain compliance with applicable RPS mandates, and the latter option is a last resort that is not expected to apply.



Furthermore, the City is aware of the need to perform a risk assessment in this RPS Procurement Plan and, as previously described, presents the results of such an initial assessment~~and intends to present the results of such assessment in this future RPS Procurement Plans.~~ At this time, and as previously noted, the City observes~~intends to observe~~ a risk management/assessment process that focuses on the identification and selection of highly experienced, financially viable renewable energy sellers, a process which is believed to materially reduce the risk of delivery shortfalls (and potential compliance deficits). The City will explore~~consider~~ the use of quantitative tools to further understand these risks,as evidenced by the risk assessment included above.~~but has yet to identify a suitable tool at this point in time—such tool may employ a stochastic approach in determining prospective variability in anticipated future renewable energy deliveries, and the results of such analysis may alter the City’s eventual margin of over procurement, if necessary, or prompt supplemental procurement activities to protect against the volumetric variability reflected in such analysis. Without the benefit of supplier performance monitoring, it is premature to perform a quantitative risk assessment, the results of which would not be meaningful. After the City completes renewable energy contracting efforts leading up to CCA program launch, it will begin the process of monitoring supplier performance and assessing prospective risks.~~

As previously noted, the City’s voluntary margin of procurement, based on the default 75% renewable service option, will serve as a significant risk mitigation mechanism in meeting pertinent RPS procurement mandates but will still be monitored, and potentially adjusted, along with the 2% minimum margin of procurement, over time to ensure that the City meets or exceeds applicable renewable energy procurement mandates during each compliance period. To the extent that such margin of over procurement is determined to be insufficient on a projected basis

(in consideration of anticipated renewable energy delivery shortfalls, project completion delays or other considerations), the City may increase planned levels of renewable energy procurement to promote the creation of larger planning reserves – this exercise will be incorporated in the City’s general resource planning process, which will assess anticipated resource needs over the near-, mid- and long-term planning horizons. The City has heightened its focus on the risk assessment process as it began its initial renewable energy solicitation in early 2021. To the extent that understanding the supplier responses to such solicitation necessitates the use of a quantitative tool, the City will act accordingly. However, if the City believes that its supplier selection process results in the identification of: (1) low-risk supply sources that are already operational; or (2) highly experienced, financially viable project developers that have consistently demonstrated a successful development track record over time, then it may choose to forgo certain elements of a quantitative assessment, which may not be necessary to understand prospective compliance risks.

Because of its relatively small size, it is likely that the City will engage in a relatively small number of long-term renewable energy supply agreements, so a meaningful delivery shortfall (relative to expectations) or project development failure amongst such contracts could seemingly result in compliance-related deficiencies for the City (related to its long-term contracting obligation). Similar issues do not seem relevant with regard to short-term renewable energy purchases, as the market continues to remain robust for CCA buyers. This noted, it is entirely unreasonable for the City to engage in significant levels of over-procurement via long-term contract, as such an approach would materially limit planning flexibility, may impose excessive costs and rate-related impacts on its CCA customers, and would seemingly expose the City to unnecessary market risks (by virtue of the fact that the timing of its planned service

commencement will necessitate the execution of all long-term supply commitments required to support early-stage operations at a single point in time – such an approach is generally not advisable, particularly with uncertain retail sales expectations that relate to the pandemic). As previously noted, the City believes that a keen focus on identifying highly experienced, financially viable long-term renewable energy suppliers is the best risk mitigation strategy for this important element of the RPS Program, and the City intends to observe this practice during its upcoming solicitation process(es).

With respect to system reliability, the City is aware of the planning challenges faced by retail sellers with internally adopted renewable energy targets that exceed RPS mandates. In particular, such retail sellers must often bear increased costs for renewable resources with diverse and complementary delivery profiles as well as comparatively high levels of energy storage infrastructure (to allow for the reshaping of renewable energy deliveries to better align with load). For example, renewable energy procurement efforts that may initially focus on relatively low-cost solar resources will often necessitate subsequent investments in co-located energy storage infrastructure and/or higher-cost baseload renewable generating technologies, such as those using geothermal, biomass and landfill gas fuel sources. These baseload renewable technologies are often priced at three-to-four times the level of in-state photovoltaic solar generation but generally provide increased capacity value (due to the more predictable, baseload generating profiles of such resources) and related reliability enhancements. By ensuring a better match of energy and load, as well as procuring resources more capable of providing ancillary services than intermittent renewable resources alone, the City seeks to mitigate potential negative system impacts such as rolling outages or violations of current standards for ancillary services. Certain of the resources that may be procured to satisfy recent

capacity mandates are also expected to support grid reliability and may include baseload renewable energy resources, renewable energy plus storage configurations or stand-alone battery storage configurations, all of which would be expected to improve grid reliability by some measure. Over time, the City will balance the often competing interests of cost and reliability~~The City will attempt to balance these competing interests~~ to support reasonably close alignment between supply and demand (reducing the need for pronounced resource ramping on the system), cost-effective procurement and overall grid reliability. The City is aware that low-cost, long-term solutions are incredibly challenging to identify but will remain committed to pursuing a conscientious planning process that balances grid reliability, compliance demonstration, and customer cost impacts.

In terms of lessons learned related to risk management, the City observes that internally adopted, minimum margin of procurement and voluntary margin of procurement generally serve as effective mitigation measures related to RPS compliance. While this approach is not a viable or desirable option for all retail sellers, the City believes that its adopted planning targets will virtually eliminate the risk of RPS compliance shortfalls. This perspective seems to be supported by the experiences of other CCAs, such as MCE, which have also adopted above-RPS planning targets and have experienced ongoing success in meeting RPS mandates.

The City has also observed the value of resource diversity across a broad spectrum of considerations, including resource location, generating technology, suppliers/developers and contract structures, amongst other concerns. Long-term renewable supply commitments are inherently risky in the sense that such commitments expose the buyer and/or seller to a variety of unknown circumstances, including but not limited to evolving market prices and policy changes. Throughout a long-term contract relationship, it seems evident that areas with initially low levels

of negative pricing (and related curtailment of energy production) can materially change as new project development activity occurs, creating (or exacerbating) conditions of over-supply and related incidents of energy curtailment. This risk is particularly challenging to manage, as California's escalating RPS procurement mandates necessitate ongoing investment in new renewable generating infrastructure, which is often sited in resource-rich areas that become oversaturated with similar generating technologies (and related delivery profiles). These circumstances seem inevitable and, over the course of a long-term supply relationship, may expose the contracted parties to unexpected risks, including negative prices (and related budgetary impacts) and curtailed deliveries (which may compromise the fulfillment of mandated procurement targets by the buyer). As previously discussed, the City's minimum margin of procurement of 2%, or 1.5% or retail load, is higher than the curtailments over the last four years for renewable resources in the CAISO areas.

In terms of the City's upcoming contracting processes, it is becoming aware that risk can also be diversified through various contract structures. For example, an "index-plus" pricing structure is useful in transferring nodal/market price risk to the seller – in such structures, the buyer pays a fixed renewable premium, while the seller assumes risk associated with market price fluctuations but also receives market revenues (which could be higher or lower than anticipated) – even though the buyer receives the energy, renewable attribute and (in certain instances) capacity value as part of such a transaction, the buyer's financial risk is generally limited to the payment of the renewable premium. For buyers who are averse to market price risk, the index-plus pricing structure effectively eliminates this concern but may result in higher overall contract costs (which may be acceptable, as a form of insurance, to mitigate market price exposure). In other structures, such as the "fixed-price" or "aggregate pricing" structure, the

renewable energy premium and energy commodity (and oftentimes, capacity value) are reflected in a single price paid by the buyer – this structure deliberately allocates market price risk to the buyer, but the buyer may also pay a lower imputed renewable premium in instances where market revenues (realized when the energy commodity is delivered to the grid) closely approximate (or exceed) the aggregate renewable energy price. In evaluating potential contract structures, decisions can be made in consideration of risk allocation preferences, and the City intends to pursue contracting structures that balance such risks over time. Initially, the City may pursue a disproportionate share of contracts that allocate market price risk to its renewable energy sellers – this may be more desirable before the City accrues meaningful financial reserves and attempts to promote budgetary certainty during early-stage program operations. Over time, however, the City expects to increasingly use aggregate pricing structures that could lower overall procurement costs but may expose the CCA program to increased market risk. Again, the City is still developing its understanding of applicable risks and related mitigation measures and will keep the Commission apprised of such information in future RPS Procurement Plans.

#### **VIII. Renewable Net Short Calculation**

Santa Barbara has provided a quantitative assessment to support the qualitative descriptions provided in this RPS Procurement Plan, which is attached as Appendix C. At this point in time and based on the City’s anticipated renewable energy contracting outcomes (which will not be completed until later this year), there have been no risk-related adjustments to the expected renewable energy quantities reflected in Appendix C. If such adjustments are deemed necessary or appropriate in the future, the City will reflect such adjustments in a future planning document.

#### **IX. Minimum Margin of Procurement (MMoP)**

The City, as shown in the table below, intends to build an electricity supply portfolio

with short-term and long-term contracts that achieve state and City Council-approved requirements related to RPS-eligible renewable energy and GHG-free energy. The following table displays the City’s intended margin of RPS over-procurement based on the differential between the SB 100 procurement targets and the City’s internally adopted RPS procurement targets.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
SBCE's Voluntary Margin of Procurement (% of Retail Sales)	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
SBCE's Voluntary Margin of Procurement (% of Retail Sales)	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%	15.0%	15.0%

The City’s currently applicable, internally adopted renewable energy procurement targets significantly exceed statewide mandates over the noted 10-year planning horizon and reflected a City-approved 75% renewable default retail service offering. Percentages reflected in the previous table include the composite effects of expected customer service elections – such percentages are reflected in the line item labeled “SBCE’s Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)” serve as SBCE’s Voluntary Margin of Procurement (“VMoP”). Following its October 2021 launch, the City will periodically review its progress in achieving the noted targets, including actual participation rates in the default and voluntary retail service offerings, which could change the voluntary margin of procurement.

To address RPS compliance risk, SBCE uses its risk assessments, including its renewable net short calculations, to establish a Minimum Margin of Procurement to guide RPS

compliance procurement planning. SBCE calculated the minimum margin of procurement, or MMoP, using a 2% risk adjustment (or planning reserve) that was applied to SBCE's minimum internally adopted RPS procurement target (see row 2 in the previous table), which is reflective of the renewable content offered through SBCE's default retail service offering. Based on the manner in which SBCE has established its MMoP, as a 2% planning risk adjustment relative to total default renewable energy requirements, the effective MMoP percentages observed by SBCE range from 2.5% (2030) to 4.2% (2021), relative to SBCE's projected RPS compliance need, over the ten-year planning horizon. The following chart provides additional detail regarding the effective MMoP percentages observed by SBCE.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
<b>SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
<b>SBCE's RPS Planning Risk Adjustment (at 2% of Minimum Internally Adopted RPS Target)</b>	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>SBCE's Minimum Margin of Procurement (% of Retail Sales)</b>	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
<b>SBCE's Minimum Margin of Procurement (% buffer relative to RPS Mandate)</b>	4.2%	3.9%	3.6%	3.4%	3.2%	3.0%	2.9%	2.7%	2.6%	2.5%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
<b>SB 100 RPS Procurement Requirement (% of Retail Sales)</b>	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
<b>SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)</b>	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
<b>SBCE's RPS Planning Risk Adjustment (at 2% of Minimum Internally Adopted RPS Target)</b>	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
<b>SBCE's Minimum Margin of Procurement (% of Retail Sales)</b>	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
<b>SBCE's Minimum Margin of Procurement (% buffer relative to RPS Mandate)</b>	4.2%	3.9%	3.6%	3.4%	3.2%	3.0%	2.9%	2.7%	2.6%	2.5%	2.5%	2.5%

SBCE's MMoP is intended to address potential delivery variability for intermittent resources, curtailment risk, project delays and other operational peculiarities that may cause actual renewable energy deliveries to deviate from projections. Note that certain of SBCE's renewable energy deliveries are not subject to variability – such agreements reflect minimum fixed delivery quantities (or quantities with limited volumetric variability) with corresponding



financial penalties (paid to SBCE by related sellers in the event of delivery shortfalls). SBCE also observes that in 2021, the entirety of its renewable energy deliveries were secured via contracts with specified minimum delivery quantities that were established to ensure that SBCE fulfilled its intended minimum renewable content.

If SBCE adopts changes to its future renewable energy content/offerings, future RPS procurement planning documents will be updated accordingly. The City assumes that future renewable procurement targets (inclusive of planning reserves necessary to meet RPS mandates) will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size (capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates.

#### **IX.A. MMoP Methodology and Inputs**

The City's MMoP is intended to address an RPS failure rate at or above that which is reflected in the renewable net short reporting template. In the event of contract under-deliveries, commercial operation delays and/or project failures, the MMoP should be sufficient to ensure SBCE meets its VMoP and is compliant with the RPS procurement requirements. As shown in Section VII above, the City's MMoP of 2% exceeds the historical level of curtailments in the CAISO grid (shown as under 0.1% for wind and under 0.7% for solar), and also exceeds the City's risk assessment of RPS contracts (shown as 0.62% of retail load). SBCE's VMoP is the annual RPS-eligible minimum portfolio content identified in SBCE's internally adopted planning targets.

As discussed in Section VIII, SBCE has incorporated risk adjustments to renewable

energy delivery estimates associated with existing generating facilities and resources that are under development. Achieving SBCE's MMoP necessitates higher levels of renewable energy procurement (1.5% of retail sales, or 2.5% - 4.2% of SBCE's RPS compliance needs throughout the ten-year planning period), which accommodate the potential for delivery shortfalls (due to a variety of circumstances) while still allowing SBCE to meet prescribed RPS mandates. Considered in concert, SBCE's VMoP and MMoP provide a substantial aggregate renewable energy planning buffer, relative to applicable compliance mandates, as reflected in the following table.

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%
SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
SBCE's Voluntary Margin of Procurement (% of Retail Sales)	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%
SBCE's Minimum Margin of Procurement (% of Retail Sales)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
SBCE's Aggregate Margin of Over-Procurement (% of Retail Sales)	40.8%	38.0%	35.3%	32.5%	29.8%	27.2%	24.5%	21.8%	19.2%	16.5%

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
SB 100 RPS Procurement Requirement (% of Retail Sales)	35.8%	38.5%	41.3%	44.0%	46.7%	49.3%	52.0%	54.7%	57.3%	60.0%	60.0%	60.0%
SBCE's Minimum Internally Adopted RPS Procurement Target (% of Retail Sales)	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%	75.0%
SBCE's Voluntary Margin of Procurement (% of Retail Sales)	39.3%	36.5%	33.8%	31.0%	28.3%	25.7%	23.0%	20.3%	17.7%	15.0%	15.0%	15.0%
SBCE's Minimum Margin of Procurement (% of Retail Sales)	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
SBCE's Aggregate Margin of Over-Procurement (% of Retail Sales)	40.8%	38.0%	35.3%	32.5%	29.8%	27.2%	24.5%	21.8%	19.2%	16.5%	16.5%	16.5%

Such excess procurement will occur based on Council-approved policy related to the level of renewable energy reflected in the City's default retail service offering as well as assumed participation in the City's voluntary "opt-down" energy service option. The City will effectively ensure its compliance with applicable RPS mandates by procuring in consideration of internal renewable energy goals that meaningfully exceed state-adopted requirements. The extent to which the City will exceed statewide RPS mandates will be dependent upon a variety of factors, including those previously noted and RPS product availability, product cost and

budgetary impacts and timely product deliveries from generating facilities under contract with the City. If the City Council considers and adopts changes to its internal renewable energy procurement targets, the organization will accordingly update future RPS planning documents to reflect such changes. Staff assumes that the future levels of over-procurement will consider a variety of factors, including but not limited to, the operational status of prospective renewable energy facilities to be placed under contract, the experience and general development track record of each project development team (associated with new resources), resource size (capacity), the location of prospective generating resources (for new facilities) and impacts of over-procurement to the CCA program's procurement budget and customer rates.

#### **IX.B. MMoP Scenarios**

The City plans to meet the annual program renewable goals reflected in the table presented in Section IX (above), including the MMoPs reflected therein. As reflected in this table, the City's anticipated MMoP percentage is 2% of its RPS target, or, equivalently, 1.5% of retail sales. . .

During its bid evaluation and supplier selection processes, the City considers a variety of risks and will explicitly incorporate such risks into its MMoP calculation after related contracting processes are complete and project development progress (for new-build renewable projects) is being tracked by CalChoice. Based on information gathered during its contract management process (which will focus on key milestone achievement and deviations from initial project development schedules for new-build projects), the City may adjust expected renewable energy deliveries. To the extent that adjusted future deliveries meaningfully differ from the City's previous expectations, additional RPS procurement may be pursued to ensure that the City maintains its desired MMoP and related minimum customer delivery commitments.

The City, via CalChoice, will also model demand-side sensitivities that may impact MMoP calculations. This will be particularly important during administration of the City's customer enrollment process, as participation rates are expected to be most volatile during this period of time. In addition to load variability resulting from customer participation levels, the City will also monitor electric vehicle penetration rates, net energy metering participation rates and other considerations that may impact overall customer energy requirements and related demand-based MMoP calculations.

## **X. Bid Solicitation Protocol**

### **X.A. Solicitation Protocols for Renewables Sales**

Santa Barbara does not have immediate plans to issue a solicitation for sales of renewable energy products/projects, as it has just commenced operations. If such a need arises in the future, however, the City will consider a protocol that: 1) ensures the City remains compliant with applicable RPS procurement mandates; 2) minimizes overall portfolio costs to the greatest extent practical; and 3) provides sufficient flexibility to accommodate reasonably anticipated supply-side and demand-side changes that could impact the City's overall renewable energy requirements.

### **X.B. Bid Selection Protocols**

Consistent with Section 399.13(a)(6)(C), Santa Barbara shall conduct solicitations for requisite energy resources, including specific needs for eligible renewable energy resources (reflecting locational preferences, when applicable, for such resources), generating capacity, and required online dates to assist in determining what resources fit best within its supply portfolio. Since CCA program governing boards are comprised of local elected officials, these solicitation and procurement decisions are overseen by elected representatives of the community and

administered by CalChoice, as previously described. These solicitation and procurement decisions will seek to comply with locally-set targets and preferences. Santa Barbara began the process of developing a renewable energy solicitation in early 2021 and released such solicitation in Q2 2021 to address its future contracting needs. Any renewable energy supply agreements resulting from future participation in renewable energy procurement processes will be brought to the City's Governing Council for approval prior to execution. Through its relationship with CalChoice, the City has engaged in developing solicitation protocols for requisite renewable energy supply and intends to incorporate a variety of considerations in related bid requirements. Pursuant to Public Utilities Code 399.13(a)(6)(C),<sup>2</sup> and the City's discussions with CalChoice, these considerations, which will be focused on solicitation protocols, bid evaluation and supplier selection, are expected to include:

1. Overall quality of response, inclusive of completeness, timeliness, and conformity;
2. Price and relative value within the City's supply portfolio;
3. Project location and local benefits;
4. Project development status, including but not limited to progress toward interconnection, deliverability, siting, zoning, permitting, and financing requirements;
5. Qualifications, experience, financial stability, and structure of the prospective project team (including its ownership);
6. Environmental impacts and related mitigation requirements, including impacts to air pollution within communities that have been disproportionately impacted by the existing generating fleet;
7. Potential impacts to grid reliability;
8. Potential economic benefits created within communities with high levels of poverty and unemployment;
9. Acceptance of the City's standard contract terms; and
10. Development milestone schedule, if applicable.

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<sup>2</sup> Cal. Pub. Util. Code § 399.13(a)(6)(C) ("Consistent with the goal of increasing California's reliance on eligible renewable energy resources, the renewable energy procurement plan shall include all of the following: A bid solicitation setting forth the need for eligible renewable energy resources of each deliverability characteristic, required online dates, and locational preferences, if any.").

When evaluating future long-term renewable purchase opportunities, the City will also consider “the employment growth associated with the construction and operation of eligible renewable energy resources.” More specifically, to the extent the City procures new RPS resources in solicitations where qualitative factors are considered, it will include a qualitative assessment of the extent to which proposed project development activities will support this goal. Such determinations will be based on information provided by the prospective supplier and the City’s independent assessment of such information. When the City procures RPS resources, it will require bidders to submit information on projected California employment growth during construction and operation. This data will include the expected number of hires, duration of hire, and an indication of whether the bidder has entered into Project Labor Agreements or Maintenance Labor Agreements in California for the proposed project.

Pursuant to Public Utilities Code 399.13(a)(8)(A), the City will also consider the inclusion of evaluative preference for “renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”<sup>3</sup> To the extent that the City procures RPS resources through solicitations where qualitative factors are considered, impact on disadvantaged communities will be considered. Such information will be gathered by requiring prospective suppliers to answer the following questions: Is your facility located in a community afflicted with poverty or high unemployment or that suffers from high emission levels? If so, the participant will be encouraged to describe

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<sup>3</sup> Cal. Pub. Util. Code § 399.13(a)(8)(A) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).

how its proposed facility can provide the following benefits to adjacent communities:

- Projected hires from adjacent community (number and type of jobs);
- Duration of work (during construction and operation phases);
- Projected direct and indirect economic benefits to the local economy (i.e., payroll, taxes, services);
- Emissions reduction – identify existing generation sources by fuel source within 6 miles of proposed facility and indicate whether the proposed facility will replace/supplant the identified generation sources; and
- To the extent that the proposed generating facility is expected to replace/supplant an existing generating facility, the prospective supplier will be asked to quantify the associated emission impacts of this transition.

These considerations, as well as various others, will be reflected in the City’s future solicitation materials and will help shape the criteria against which prospective responses will be evaluated. Based on the success of its initial solicitation(s), the City may adapt these considerations to improve success in future renewable energy procurement efforts. As the City has yet to prepare or release solicitation materials, it does not have related documentation to share at this point in time.

#### **X.C. LCBF Criteria**

The Least-Cost Best Fit methodologies approved by the Commission pursuant to D.04-07-029, D.11-04-030, D.12-11-016, D.14-11-042, and D.16-12-044 are expressly only directly applicable to IOUs and the Commission does not have jurisdiction over the solicitation

protocols of CCAs. However, consistent with Section 399.13(a)(9),<sup>4</sup> Santa Barbara will consider best-fit attributes that support a balanced mix of resources to help support reliability of the electrical grid.

In particular, the City anticipates considering “least cost best fit” (“LCBF”) during the evaluation of responses to its renewable energy solicitation(s). From the City’s perspective, use of the term “costs” should appropriately include considerations beyond the basic price of renewable energy. More specifically, costs should include a broad range of considerations, such as: (1) reputational damage resulting from failure to meet state-mandated and/or internally established renewable energy procurement targets; (2) compliance penalties resulting from failed project development efforts or delivery shortfalls; (3) administrative complexities related to dealing with inexperienced suppliers (such as prolonged contract negotiation processes and uncertainties related to project milestone timing and achievement); and (4) impacts to planning certainty resulting from higher risk projects. These factors, as well as various others, will be considered by the City as components of its cost evaluation processes, which may lead to the selection of offers that aren’t necessarily the lowest cost option(s), as expressed on a dollar-per-MWh basis. With regard to “fit”, this aspect of a prospective supply opportunity has as much to do with compatibility (between the City and its suppliers) and alignment with key local objectives as it does with balancing customer usage and expected project deliveries, particularly when considering long-term contracting opportunities that will necessitate a constructive working relationship over a period of ten years or more. The City also interprets the term “fit” to mean the general suitability of a project opportunity in promoting grid reliability – while the

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<sup>4</sup> Cal. Pub. Util. Code § 399.13(a)(9) (“In soliciting and procuring eligible renewable energy resources, each retail seller shall consider the best-fit attributes of resource types that ensure a balanced resource mix to maintain the reliability of the electrical grid.”).



City has no explicit operational or maintenance responsibilities related to the local distribution system serving its customers or the bulk electric system at large, it is aware of the profound importance of supporting grid reliability through its procurement processes. With this in mind, the City will make best efforts to balance the demands of California’s rigorous RPS compliance mandates with its interest in promoting such reliability. This is no small task, and the City expects that considerations related to grid reliability will be incorporated at each stage of its planning and procurement processes but also acknowledges that the full scope of its RPS contract/resource portfolio (including related impacts to grid reliability) will significantly evolve throughout the organization’s operating history. Over time, the City expects to thoughtfully assemble a diversified portfolio of RPS contracts/resources that will not only contribute to the City’s achievement of applicable compliance mandates but also to improved stability and reliability of California’s electric system. As such, the City’s LCBF methodology will consider a broad range of components, including those previously noted, balancing a variety of pertinent considerations at the time each renewable purchase opportunity is being evaluated.

Additionally, the requirement of Section 399.13(a)(9) to give preference to renewable projects located in certain communities is expressly only applicable to “electrical corporations” and is not mandatory for CCAs.<sup>5</sup> However, Santa Barbara recognizes the need to help mitigate the impacts of air pollution in regions of the state where communities have been disproportionately impacted by the existing generating fleet as well as the need to bring economic benefits to communities with high levels of poverty and unemployment.

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<sup>5</sup> Cal. Pub. Util. Code § 399.13(a)(9)(1) (“In soliciting and procuring eligible renewable energy resources for California-based projects, each electrical corporation shall give preference to renewable energy projects that provide environmental and economic benefits to communities afflicted with poverty or high unemployment, or that suffer from high emission levels of toxic air contaminants, criteria air pollutants, and greenhouse gases.”).

Consistent with this recognition, Santa Barbara will consider the manner in which air pollution may be impacted during its renewable energy solicitation process(es) and related project selection.

## **XI. Safety Considerations**

Santa Barbara holds safety as a top priority. Since Santa Barbara does not own, operate, or control generation facilities, Santa Barbara's procurement of renewable resources will not present any unique safety risks. This Section describes how Santa Barbara has taken actions to reduce the safety risks that may be posed by its renewable resource portfolio and how Santa Barbara supports the state's environmental, safety, and energy policy goals.

As the City pursues future renewable energy purchases, it will consider requiring verbiage addressing adherence (of the seller/project operator) to prudent electrical practices and applicable safety requirements, including compliance applicable laws and regulations relating to safety. During future contracting efforts, the City will perform a prudent assessment of the supplier's willingness to include such provisions as well as any related impacts to pricing/cost – the City is aware that requesting more stringent processes and/or requirements may trigger requested price increases by the seller/supplier. To the extent that product pricing would meaningfully increase due to the inclusion of such provisions, the City would need to evaluate budgetary impacts and other risks before proceeding. The City is hopeful that most suppliers will be agreeable to the inclusion of such provisions and will be diligent in requesting such language in its future contracts.

In addition, the City has provided additional information below on its existing safety practices.

### **XI.1. Wildfire Risks and Vegetation Management**

In ongoing and future negotiations, the City will ensure that its contracts with renewable

generating facilities will require the facility operator to comply with all relevant safety requirements. This will be accomplished, in part, through contract provisions that require the counter party to operate and maintain the facility in compliance with all relevant laws and prudent operating practices, including relevant safety and environmental protection standards.

At this point in time, the City has yet to adopt specific procurement policies or preferences focused on the acquisition of forest biomass resources. The City is aware of the mitigating impacts that biomass generators, which use forestry waste as feedstock, may have on wildfire risk and will consider the adoption of a related procurement policy in the future. During pre-launch activities, however, the creation of such a policy and exhibition of preference for biomass generating resources is premature and will be addressed in the future, following the completion of upcoming launch activities.

In future solicitations, the City will identify whether any of the bidding generating facilities are located within Tier 2 or Tier 3 of the Commission's Fire-Threat Map. When evaluating executing a contract with a facility located in Tier 2 or Tier 3, the City will consider requiring that the seller utilize elevated wildfire prevention and safety measures for any construction, operation, and maintenance activities.

## **XI.2. Decommissioning Facilities**

As the City has yet to complete its initial long-term renewable energy contracting efforts, it has not developed any plans or requirements related to the disposition of associated generating facilities following completion of applicable delivery terms. For future contract negotiations, the City will evaluate requiring the seller to provide a project safety plan or a similar type of reporting document, which will include information on procedures for identifying and

remediating safety incidents, as well as describing any relevant requirements (such as those associated with the permitting of the facility) for the decommissioning of the facility.

### **XI.3. Climate Change Adaptation**

The City's decision to offer 75% renewable energy through its default service option should mitigate climate change risk via increased use of renewable energy resources and related greenhouse gas emission reductions. In future solicitations, the City will consider developing additional bid evaluation criteria based on climate change risks factors, including but not limited to risks associated with facilities located in regions that are forecasted to be impacted by higher instances of sea-level rise, flooding, wildfires, and/or elevated temperatures. As stated above, the City will provide more detailed strategies for climate change adaptation in a future RPS Procurement Plan.

### **XI.4. Impacts During Public Safety Power Shut-off (PSPS) Events**

As the City has yet to commence CCA operations, potential impacts related to future PSPS events are uncertain. However, with regard to resource planning, it is likely that a PSPS event impacting the City would marginally reduce retail electric sales for CCA customers and, as a result, would generate a very small increase in the proportionate share of renewable energy supply accruing to the City (if renewable supply agreements continue to perform as expected during such events).

As the City executes contracts with renewable generating facilities, it will evaluate the risk of the loss of generation associated with PSPS events both for facilities that are already online and for facilities that are still under development. Based on the impact of prior PSPS events to generating facilities, the City anticipates that the total quantity of any PSPS-related reductions in RPS-eligible generation will be relatively small and would likely be offset by the

potential reduction in retail sales that would result from PSPS events that directly impact the City's customers. Therefore, the likelihood of a material impact to the City's renewable energy planning process or related performance metrics seems unlikely.

#### **XI.5. Biomass Procurement**

As the City has yet to complete its initial long-term renewable energy contracting efforts, it is difficult to predict how its renewable energy supply portfolio will evolve over time. While the City has no specific biases (for or against) biomass resources, the prospect of procuring such resources will be dependent upon offers received during future solicitation processes. To the extent that future biomass offers/proposals are competitive (with similar offers received from other resource types) and/or in the event the City adopts policies explicitly supporting the acquisition of biomass energy resources, the City will strongly consider the inclusion of biomass energy within its renewable energy supply portfolio.

#### **XII. Consideration of Price Adjustment Mechanisms**

During future contracting processes, and consistent with SB 350 and SB 100, Santa Barbara will review the prospects of incorporating price adjustments in contracts with online dates more than 24 months after the date of contract execution. As noted in the ACR, such price adjustments could include price indexing to key components or to the Consumer Price Index.

#### **XIII. Curtailment Frequency, Cost, and Forecasting**

This Section responds to the questions presented in Section ~~65~~.13 of the ACR<sup>6</sup> and describes Santa Barbara's strategies and experience so far in managing Santa Barbara's exposure to negative pricing events, overgeneration, and economic curtailment for Santa Barbara's region and portfolio of renewable resources.

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<sup>6</sup> ACR at ~~33-34~~~~30-32~~.

### **XIII.1. Factors Having the Most Impact on the Projected Increases in Incidences of Overgeneration and Negative Market Price Hours**

Santa Barbara is a new CCA organization, which has yet to commence operations, and the City continues to learn a great deal about the California energy market, including information and considerations related to energy curtailment, potential cost impacts, contracting considerations and other concerns. The following represents Santa Barbara's understanding of this topic, which may impact future procurement processes.

Due in large part to the rapid increase in the amount of wind and solar generating facilities that have been brought online throughout the western United States, the California Independent System Operator's ("CAISO") balancing authority area has experienced an increasing frequency and magnitude of curtailment and negative pricing events. As of the end of 2019, California had over 12,800 MW of solar, 9,400 MW of behind-the-meter solar, and 5,900 MW of wind.<sup>7</sup> This increased capacity results in discrete periods where the majority of load in the CAISO is served by solar and wind resources. The monthly maximum load served by wind and solar in the CAISO has averaged ~~64.3~~<sup>64.4</sup>% percent over the past ~~43~~ years (May 2018 to May 202~~2~~<sup>+</sup>), and in May of 2022 the monthly maximum load served by wind and solar was just under 95%, while the maximum 5-minute amount of all renewables serving load was 103.5%~~in April of 2021 the monthly maximum load exceeded 85%.~~<sup>8</sup> To address the resulting instances of over-supply, the amount of curtailment of wind and solar in the CAISO has significantly increased each year from 2015 through 2020, totaling 187,000 MWh in 2015, 308,000 MWh in 2016, 379,510 MWh in 2017, 461,043 MWh in 2018, 965,241 MWh in 2019,

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<sup>7</sup> California Energy Commission, Renewable Energy Tracking Progress, Feb. 2020, at 6, *available at* [https://www.energy.ca.gov/sites/default/files/2019-12/renewable\\_ada.pdf](https://www.energy.ca.gov/sites/default/files/2019-12/renewable_ada.pdf).

<sup>8</sup> CAISO, Monthly Renewables Performance Report, May 202~~2~~<sup>+</sup>, *available at* <http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2022.html>~~<http://www.caiso.com/Documents/MonthlyRenewablesPerformanceReport-May2021.html>~~.

and 1,586,500 MWh in 2020.<sup>9</sup> As of May 31, 2021, the total curtailment of solar and wind year to date is already 1,062,270 MWh.<sup>10</sup> For 2021 the total level of wind and solar curtailments was 1,504,803 MWh.<sup>11</sup> Curtailment is typically the highest during the months of March, April, and May when hydroelectric generation is historically at its highest. Curtailment levels and percentages for the CAISO, [as well as an analysis of negative prices and forecasted curtailments from those negative prices](#), were presented above in Section VII.

In the CAISO energy markets, much of the curtailment of renewable resources is achieved through the market process because of renewable energy resources voluntarily submitting bids into the energy markets which cause them to shut down when market conditions create low energy prices. Because of this structure the curtailment data provided will also be indicative of when negative prices occur. The City recognizes this connection and thus the analysis above in Section VII as to why curtailments are not expected to increase as they have over the past few years will apply to negative prices in a similar manner to curtailments. This has influenced CalChoice's ten-year negative price forecast which mirrors the frequency of historical renewable energy curtailments. As explained elsewhere in this document, the City will take steps through its contracting to reduce its risk exposure to low prices and curtailment of renewable resources. The City will continue to monitor this situation to the extent such circumstances are likely to impact contract administration and/or future procurement activities. If prospective renewable generating opportunities are located in areas that are prone to frequent instances of negative market pricing (based on available historical data), the City will be sure to evaluate such data to better understand prospective financial impacts and/or pursue contractual pricing

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<sup>9</sup> CAISO, Managing Oversupply, Wind and Solar Curtailment Totals, updated June 6, 2021, *available at* <http://www.caiso.com/informed/Pages/ManagingOversupply.aspx>.

<sup>10</sup> *Id.*

<sup>11</sup> See Curtailment table in Section VII above.

structures that will insulate the CCA program from such risks. Until such time that the City begins considering specific renewable project/contract opportunities, however, the City assumes that incidences of over-generation will continue to occur (or increase) in areas of the state with low load and relatively high levels of generation. To the extent there are not opportunities to store, export or otherwise use such generation as it occurs, the City understands that market pricing would likely be suppressed to the extent that generation exceeds load; and to the extent that generation meaningfully exceeds load, market pricing could turn negative (or significantly negative). This concern will be considered by the City when evaluating future renewable project/contract opportunities, and to the extent that certain project locations seem predisposed to incidences of negative pricing, the City will weigh such risk against other available project/contract opportunities. Ultimately, the City must satisfy its RPS procurement mandates and will need to procure amongst available opportunities, even if such opportunities present related risks to the City – in such instances, the City may seek to minimize its negative price risk through contract structures that alleviate these concerns for the buyer.

#### **XIII.2. Written Description of Quantitative Analysis of Forecast of the Number of Hours Per Year of Negative Market Pricing for the Next 10 Years**

Santa Barbara is a new CCA organization, which has yet to commence operations and has not yet completed a 10-year negative pricing analysis. Based on the City's initial contracting efforts (including available project locations, contract structures, pricing structures, etc.), which have yet to occur, the City will determine whether such analysis will be instructive in understanding potential issues (directly related to its prospective renewable energy contracts) that may occur due to instances of negative pricing. At this time, however, the completion of such an analysis is premature and not deemed necessary – in particular, there would be no apparent value to the City in preparing a random 10-year negative price forecast without such



forecast being related to a specific project/contract opportunity; without such a relationship, the noted forecast would provide meaningless values/data that would not be instructive in assembling or managing the City's eventual RPS supply portfolio.

The City notes that the "shelf life" of a 10-year negative price forecast is generally very brief. The City is also aware that curtailment activities (due to incidences of deeply negative pricing at certain time of day) may reduce expected renewable energy deliveries and will consider such risks in its planning and contracting processes. The City is hopeful that the Commission appreciates this perspective, and the City will look forward to providing additional information in this regard after it has completed initial procurement efforts and has specific project/contract opportunities to analyze/evaluate. At that time, the requested 10-year negative price forecast *may* be more insightful to the City and other LSEs.

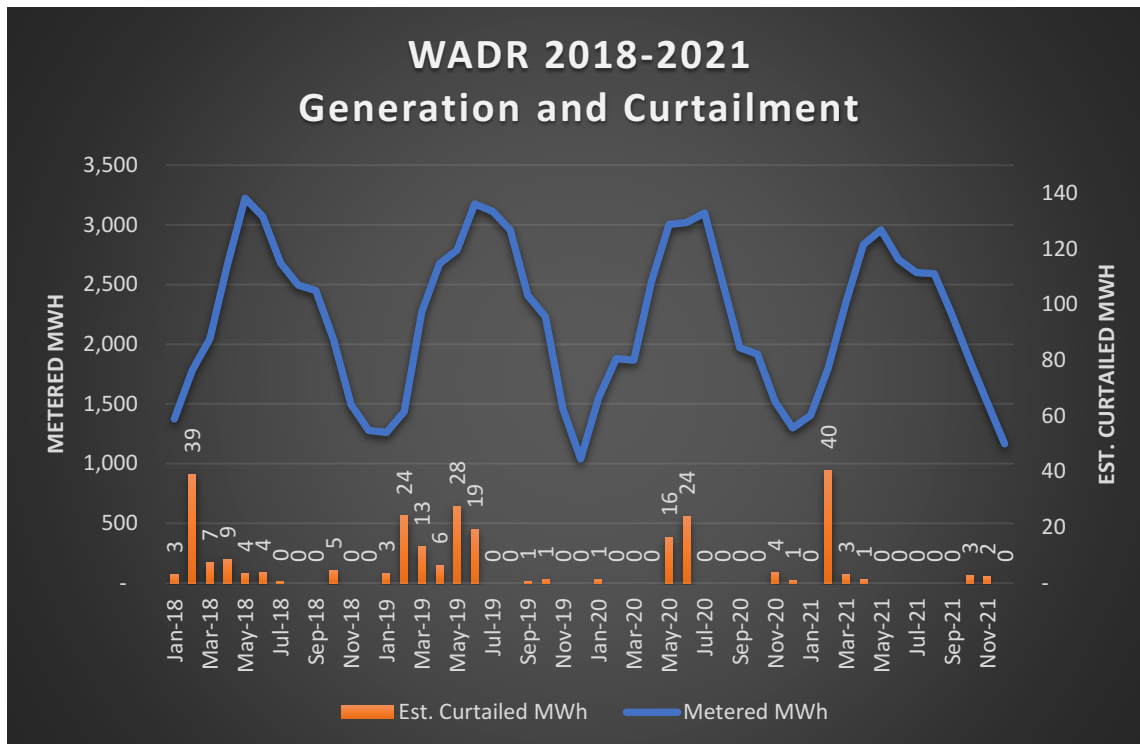
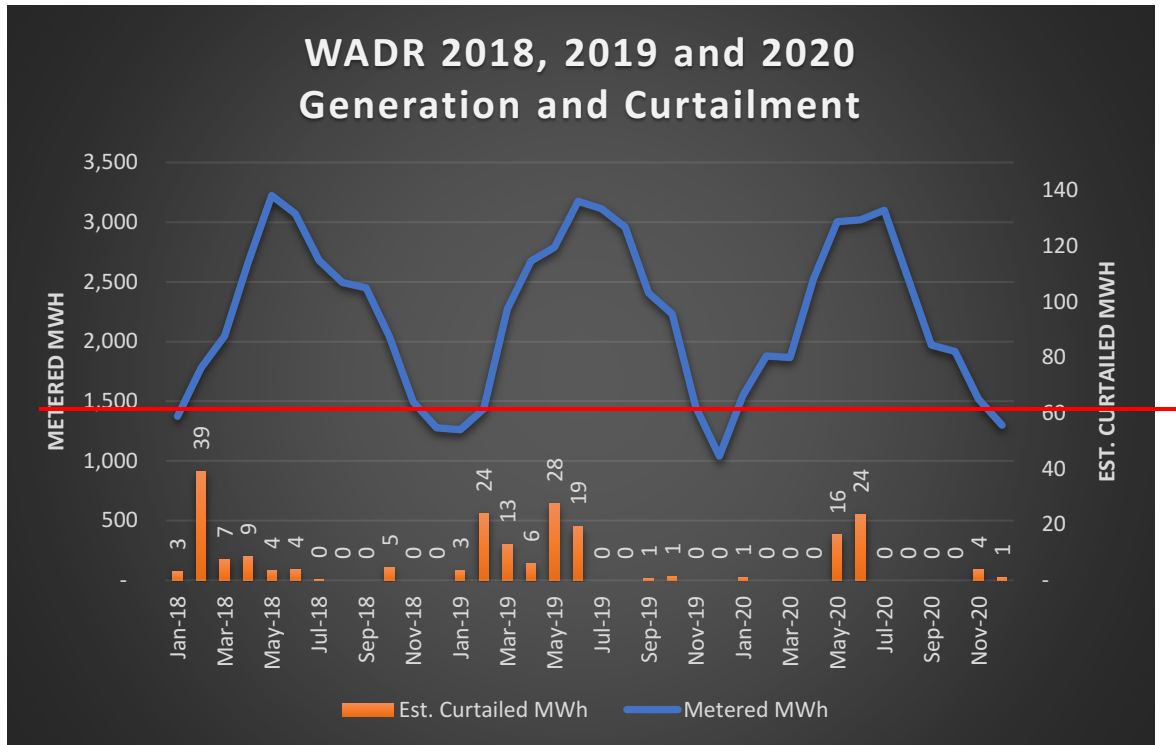
### **XIII.3. Experience, to Date, With Managing Exposure to Negative Market Prices and/or Lessons Learned from Other Retail Sellers in California**

Santa Barbara is a new CCA organization, which has yet to commence operations. As such, the City has no experience managing exposure to negative price risk but has initiated discussions with CalChoice to learn more about this topic.

Based on its association with CalChoice, which facilitates informational sharing and interagency coordination amongst its members, the City has been made aware of LCE's ongoing experiences managing negative pricing and curtailment risk. LCE has advised CalChoice of the following information regarding its first long-term power purchase agreement with the 10 MW Western Antelope Dry Ranch ("WADR") photovoltaic solar facility, which is located in Lancaster. During its operating history with this renewable generating facility, LCE has experienced instances of negative pricing at certain points in time. Recent data suggests that such instances are more frequent during the Spring season (months of March, April and May)

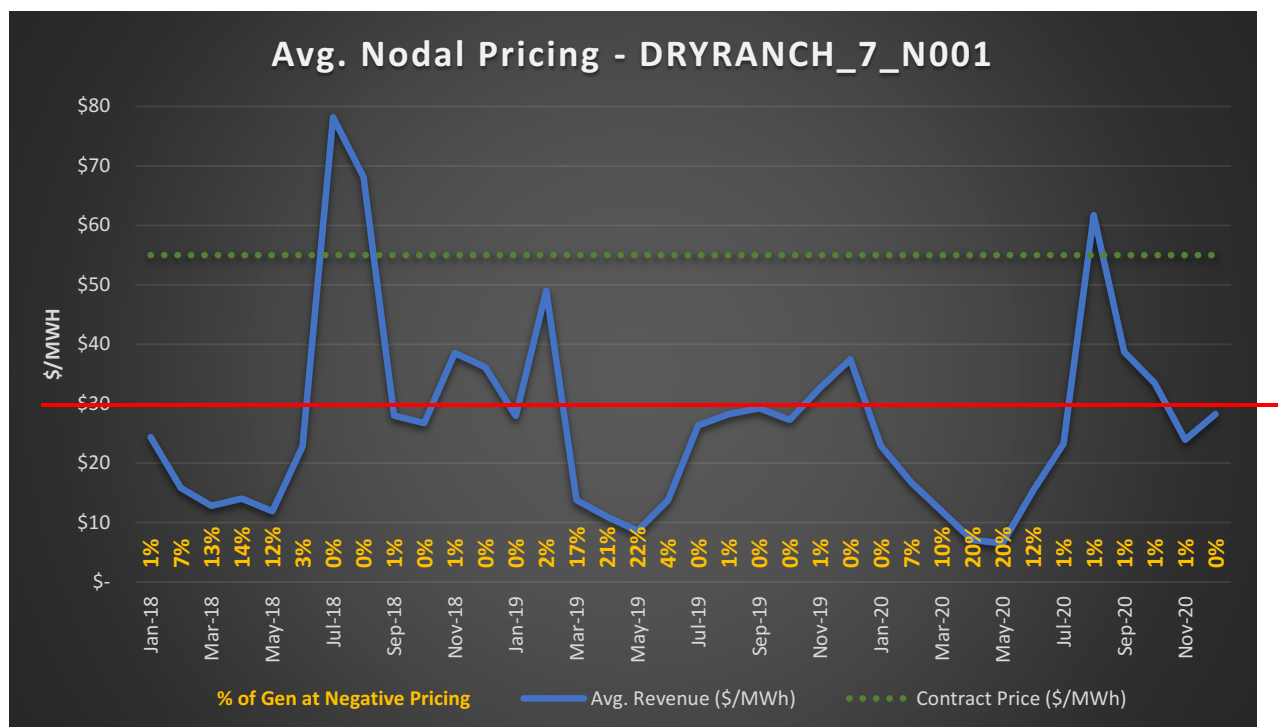
and, consistent with the City's observations regarding curtailment reflected in Section XIII.1, indicates that suppressed pricing generally results from relatively strong solar production throughout the region, coupled with comparatively low energy usage (when moderate seasonal temperatures prevail). To the extent that California experiences strong regional hydroelectric production/imports, negative pricing pressures may be exacerbated.

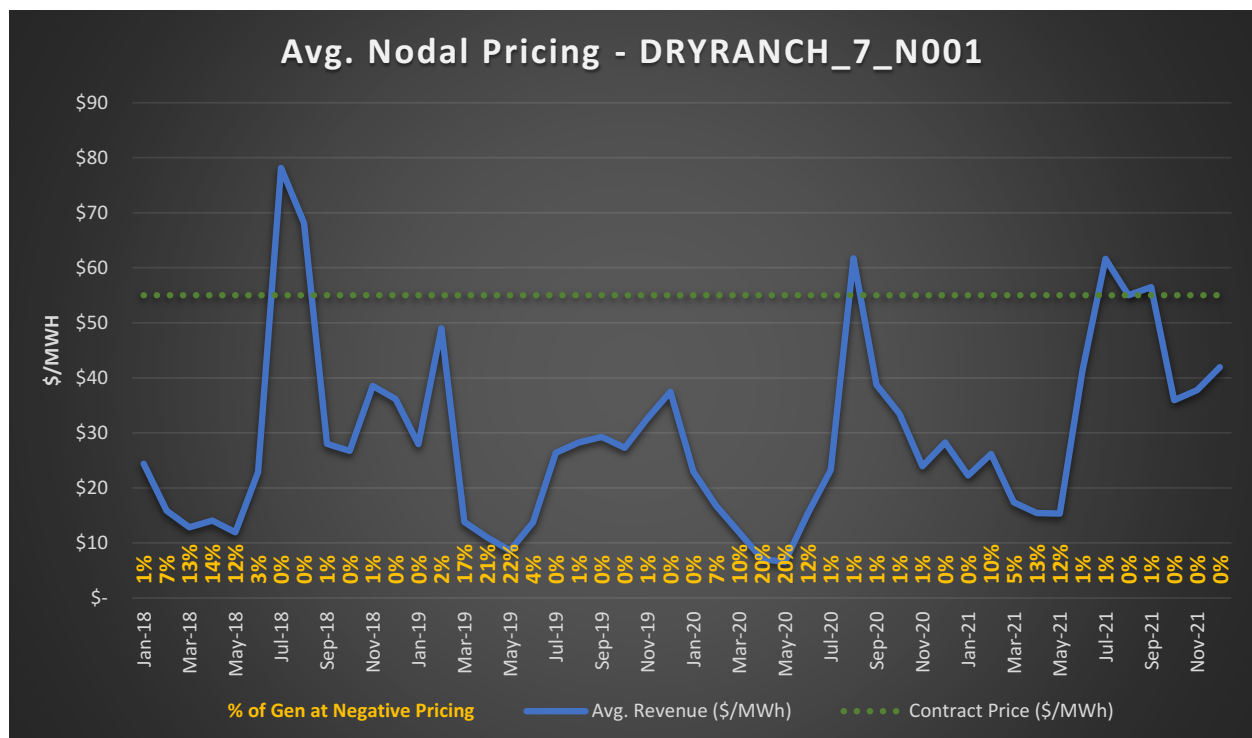
Based on 2018, 2019, ~~and 2020~~, and 2021 historical data, CalChoice observed that negative prices have impacted facility generation during ~~7~~10% to 22% of solar-producing hours during the months of February, March, and April~~March, April and May~~. Negative pricing in other months is far less prevalent, affecting facility generation on a limited basis (occurring during zero to 10~~7~~% of hours in which facility generation has occurred). In terms of curtailment, the City understands that LCE has developed a bidding strategy with its scheduling coordinator that limits exposure to negative pricing based on a pre-determined bid floor (meaning, a pre-determined negative price, below which facility generation would be curtailed), but LCE has only experienced facility curtailments totaling 261~~212~~ MWh over the aforementioned four~~three~~-year period, or 0.23% of total potential energy production (which approximates 106~~80~~,000 MWh during this same four~~three~~-year period). The impacts of curtailment/negative pricing costs incurred by LCE have been similarly limited. The following chart indicates total monthly generation from the WADR facility during the 2018, 2019, ~~and 2020~~, and 2021 calendar years as well as estimated monthly curtailed MWh (note the differences in scale reflected on each axis).



Adjacent nodal pricing also remains relatively strong, despite substantial solar generation within

the region. Average energy pricing at the DRYRANCH\_7\_N001 node, the basis for WADR energy settlements, continues to show limited incidents of negative pricing. Over the ~~four~~<sup>three</sup>-year period reflected in CalChoice's analysis, average revenues collected by LCE for WADR-generated electricity are ~~\$28.39~~<sup>nearly \$26.04</sup>/MWh. The following chart reflects average nodal pricing during the 2018, 2019, 2020, and 2021 ~~and 2020~~ calendar years as well as the percentage of WADR generation occurring during periods of negative pricing.





prepared to support similar data monitoring for other supply opportunities that may be pursued by its membership and will coordinate with such members regarding pertinent bidding strategies, as appropriate.

If the City pursues supply agreements that could expose the organization to negative pricing and curtailment risk, the City would consult with CalChoice to perform pertinent analyses that would be intended to bound prospective exposure (in terms of frequency and potential overall cost) related to negative pricing. Based on information/data derived through such analyses, the City would coordinate with CalChoice and its scheduling coordinator to develop a bidding strategy, if deemed necessary, that would create desired limitations to such negative price risk, acknowledging however, that any curtailment decisions (related to negative pricing) would reduce the expected quantity of renewable energy to be received from such contracts – such circumstances could necessitate supplemental procurement, if meaningful delivery shortfalls occur.

#### **XIII.4. Direct Costs Incurred, to Date, for Incidences of Overgeneration and Associated Negative Market Prices**

Santa Barbara is a new CCA organization, which has only just commenced operations. As such, the City has limited information on direct costs related to negative pricing (for incidences of overgeneration).

#### **XIII.5. An Overall Strategy for Managing the Overall Cost Impact of Increasing Incidences of Overgeneration and Negative Market Prices**

While curtailment is a viable renewable integration strategy that may be more cost-effective than other options, there are potential negative consequences from excessive curtailment. Curtailment of solar and wind represents a lost opportunity to generate zero GHG emitting electricity, and excessive curtailment could impact the ability of the state to meet its

environmental and energy policy goals. Additionally, these over-supply situations expose ratepayers to increased costs because their load serving entities must either economically curtail the generating resource (and often pay for the electricity that was not generated) or generate power and be exposed to negative prices. Because these conditions are largely driven by state policy, it is appropriate to consider macro-level mitigation measures through CAISO initiatives, Commission rulemakings, and possibly even legislation. There are a number of measures and policies that have already been implemented or are currently being pursued that will have significant impacts on how substantial curtailment will be in the future. This includes the expansion of the Energy Imbalance Market, improvements to the CAISO market design and structure, enhanced forecasting capabilities, time of use rates, improved EV charging functionalities, and smart deployment of distributed energy resources. The Commission's Integrated Resource Plan ("IRP") proceeding will be an appropriate forum to measure the impact of these policies and the effect that they will have on future curtailment. These new measures will need to be modeled and incorporated into forecasts of future curtailment.

Santa Barbara will consider the impact of curtailment and negative pricing on its future supply portfolio and will factor potential curtailment into its long-term planning. Due to the difficulty in accurately forecasting curtailment, Santa Barbara will coordinate with CalChoice in its review of historical data on curtailment (such as the data on curtailments in the CAISO present above in Section VII) and negative pricing for the regions in which its prospective and contracted generating resources are located. When Santa Barbara evaluates new procurement, the potential amount of future curtailment will be one factor that Santa Barbara considers. While Santa Barbara has not developed an individualized forecast of future curtailment, Santa Barbara will factor potential curtailment into both its minimum margin of procurement (described in

Section IX) and its Risk Assessment (Section VII), if deliveries associated with the City's portfolio of renewable energy supply commitments could be impacted by buyer- or seller-initiated curtailment activities. Additionally, and if applicable, Santa Barbara will take action to limit the impacts of curtailment on its ratepayers and potential compliance shortfalls that could result from significant curtailment events. Santa Barbara expects that it will pursue contract terms that recognize and limit the potential financial impacts of negative pricing and give the City greater flexibility to direct economic curtailment.

#### **XIII.6. Contract Terms Included in RPS Contracts Intended to Reduce the Likelihood of Curtailment or Protect Against Negative Prices.**

The City has incorporated terms in its contracts to limit consequences from negative prices. These include contracts with fixed quantities of RPS resources, and contracts with penalties for failure to deliver required amounts of RPS energy. An example of such language included in City contracts is:

**Guaranteed Energy Production:** Seller shall be required to deliver to Buyer no less than the Guaranteed Energy Production (as defined below) in each two (2) Contract Year block (as opposed to rolling) period during the Delivery Term ("Performance Measurement Period"). "Guaranteed Energy Production" means an amount of Product, as measured in MWh, equal to one-hundred fifty percent (150% of the average Expected Energy (as set forth on the Cover Sheet) for each Performance Measurement Period. The calculation will be performed once each Performance Measurement Period, beginning with the second anniversary of the Delivery Term Start Date.

#### **XIV. Cost Quantification**

As the City has yet to procure requisite renewable energy supply, there is currently no information to report in the Cost Quantification Table, Appendix E. As such, and in



consideration of direction provided by the Commission, the City has completed Appendix E, reflecting zero values due to fact that contractual commitments for requisite renewable energy supply have yet to be arranged. The City will update such information in future RPS Procurement Planning documents when it becomes available.

## **XV. Coordination with Integrated Resource Planning Proceeding**

The resources identified in this RPS Procurement Plan are consistent with resources identified in Santa Barbara's [most recent initial](#) IRP, which were approved by Santa Barbara's Governing Council and provided to the Commission for certification on September 1, 2020. As required by the ACR,<sup>12</sup> Santa Barbara includes the following table that describes how Santa Barbara's [2021-2022](#) RPS Procurement Plan conforms with the determinations made in the IRP Proceedings (R.16-02-007 and R.20-05-003). To the extent there are changes related to the IRP that would impact information reflected in this table or elsewhere in this [Final 2021](#) RPS Procurement Plan, the City will further describe such items in a subsequent planning document, as appropriate.

IRP Section Subsection	RPS Alignment in IRP	
<b>III. Study Results</b> <b>A. Conforming and Alternative Portfolios</b>	Retail sellers should explain how the RPS resources they plan to procure, outlined in their RPS Plan, will align with each of their Conforming Portfolios being developed in their <del>2020</del> IRP Plans for Commission approval and certification. This should include:	
	<i>1. Existing RPS resources that the retail seller owns or contracts.</i> <i>2. Existing RPS resources that the retail seller plans to contract with in the future.</i>	The City has yet to complete its initial renewable energy contracting efforts and, therefore, has no information to report other than those anticipated RPS resources reflected in its IRP.  The City expects to participate in its initial renewable energy solicitation in early 2021 and will gather information regarding prospective

<sup>12</sup> ACR at 30-33.

	<p>3. <i>New RPS resources that the retail seller plans to invest in.</i></p> <p><a href="#"><u>4. New and existing resources that will be used to meet Mid-Term Reliability obligations adopted in D.21-06-035.</u></a></p>	<p>renewable energy contracting opportunities during that process, but it has yet to develop a clear understanding of the specific resources that it will contract with in the future.</p> <p>However, as part of its 2020 IRP filing, the City submitted two Preferred Conforming Portfolios that achieve its proportional share of both the 46 and 38 MMT GHG targets. Because the City has yet to identify its initial long-term RPS supply commitments that will contribute to the achievement of such portfolio goals, all new and existing resources reflect those that the City intends to contract with in the future. Such procurement efforts are expected to contribute to the achievement of relevant GHG targets as well as RPS procurement requirements, including the 65% long-term contracting requirement.</p> <p>Description of Conforming Portfolios:</p> <ul style="list-style-type: none"> <li>• 46 MMT Conforming Portfolio: Portfolio that achieves the City’s proportional share of a 46 MMT statewide GHG target <ul style="list-style-type: none"> <li>○ The 46 MMT Conforming Portfolio assumed the use of new RPS resources not yet placed under contract, including: 15 MW of new solar resources; and 10 MW of new wind resources</li> <li>○ The 46 MMT Conforming Portfolio also assumed the use of existing RPS resources not yet placed under contract, including: 11 MW of existing solar resources; 30 MW of existing wind resources; and 3 MW of existing biomass resources</li> <li>○ The City’s 46 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 46 MMT reference system plan</li> </ul> </li> <li>• 38 MMT Conforming Portfolio: Portfolio that achieves the City’s proportional share of a 38 MMT statewide GHG target</li> </ul>
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- The 38 MMT Conforming Portfolio assumed the use of new RPS resources not yet placed under contract, including: 15 MW of new solar resources; and 10 MW of new wind resources
- The 38 MMT Conforming Portfolio also assumed the use of existing RPS resources not yet placed under contract, including: 18 MW of existing solar resources; 48 MW of existing wind resources; and 4 MW of existing biomass resources
- The City's 38 MMT portfolio conformed to the procurement timing, resource quantities, and general resource attributes identified in the 38 MMT reference system plan

Until the City successfully launches its CCA program and demonstrates a successful track record during early-stage operations, including the accrual of prudent financial reserves, it would be premature to speculate on future resource investments.

Description of 2022 Preferred Conforming Portfolios:

- 38 MMT in 2030 and 30 MMT in 2035 Conforming Portfolio
  - This is a continuance of the 38 MMT portfolio from the 2020 IRP. It is anticipated at this time that the contracts outlined above will continue to be sufficient
- 30 MMT in 2030 and 25 MMT in 2035 Conforming Portfolio:
  - The City is only beginning to determine how it plans on meeting this new, lower GHG requirement. The City anticipates that the procurement required will be similar to the outlines discussed above to meet the 38 MMT

		<p><a href="#">portfolio from the 2020 IRP.</a></p> <p><a href="#">Meeting the Mid-Term Reliability obligations from D.21-06-035:</a></p> <ul style="list-style-type: none"> <li>• <a href="#">The City is participating in the Joint CalChoice, Desert Community Energy Authority, and Clean Energy Alliance Mid-Term Reliability Request for Proposals. Currently, negotiations are ongoing with short-listed resources.</a></li> </ul>
<p><b>IV. Action Plan</b></p> <p><b>A. Proposed Activities</b></p>	<p>Retail sellers should describe how they propose to use RPS resources to implement both Conforming Portfolios. Narratives should include:</p>	
	<p><i>1. Proposed RPS procurement activities as required by Commission decision or mandated procurement.</i></p> <p><i>2. Procurement plans, potential barriers, and resource viability for each new RPS resource identified.</i></p>	<p>The City expects to participate in its initial renewable energy solicitation in early 2021. Based on the outcome of this process, the City will determine the process(es) required to fulfill future renewable energy procurement requirements.</p> <p>To ensure compliance with its GHG and RPS targets, the City plans to substantially rely on GHG-free and RPS-eligible resources while contributing to statewide reliability requirements and responsibly managing overall portfolio costs. This approach is generally consistent between the 46 MMT Conforming Portfolio and 38 MMT Conforming Portfolio <a href="#">in the 2020 IRP Plan, as well as the 30 MMT and 25 MMT portfolios required to be included in the 2022 IRP Plan.</a></p> <p>Due to the City not serving customers when D.19-11-016 was adopted by the Commission, the City does not have an incremental capacity procurement obligation per D.19-11-016. Instead, Southern California Edison has assumed the responsibility for the incremental capacity procurement obligations on behalf of the City's customer base and will charge the City and its customers for the cost of the capacity procured through the final Modified Cost Allocation Mechanism. The incremental capacity contracts that Southern California Edison has entered into or will be entering into to satisfy the requirements of D.19-11-016 have been reflected in the City's 38 MMT and 46 MMT Resource Data Templates</p>

		<p>and throughout the City’s IRP Narrative.</p> <p>The City expects to administer future solicitation processes to fill outstanding resource needs required to meet portfolio specifications reflected in its 46 MMT and 38 MMT Preferred Conforming Portfolios as well as ongoing RPS procurement obligations. As noted elsewhere in this <del>Final 2021</del> RPS Procurement Plan, the City will update the Commission with regard to the outcomes of its current long-term RPS contract negotiations in a future iteration of this planning process.</p>
<b>IV. Action Plan</b> <b>B. Procurement Activities</b>	<p>The retail seller should describe the solicitation strategies for the RPS resources that will be included in both Conforming Portfolios. This description should include:</p>	
	<p><i>1. The type of solicitation.</i></p> <p><i>2. The timeline for each solicitation.</i></p> <p><i>3. Desired online dates.</i></p> <p><i>4. Other relevant procurement planning information, such as solicitation goals and objectives.</i></p>	<p>The City may participate in distinct solicitations for different products (for example: specific renewable energy products, generating resources or storage infrastructure), or it may choose to solicit multiple products in the same solicitation. These solicitations will be competitive and may be similar to the City’s initial long-term RPS solicitation, which was previously described in this <del>Final 2021</del> RPS Procurement Plan.</p> <p>The City will administer future solicitations, as necessary, to promote consistency with the resource development plan identified in the IRP (for purposes of promoting achievement with state-mandated RPS targets as well as the City’s internal targets). As noted above, the City anticipates administering upcoming solicitation activities consistent with the process and timeline described in Section I.</p> <p>During administration of future procurement processes, the City will utilize the evaluative and contract management processes (further described above in Section X and elsewhere in this Plan) to promote timely project completion and improve planning certainty.</p>
<b>IV. Action Plan</b>	<p>Retail sellers should provide a summary of the potential barriers to implementing both Conforming Portfolios as they relate to RPS resources.</p>	

C. Potential Barriers	The section should include:	
	<p><i>1. Key market, regulatory, financial, or other resource viability barriers or risks associated with the RPS resources coming online in both retail sellers' <del>Conforming</del> Preferred Portfolios.</i></p> <p><i>2. Key risks associated with the potential retirement of existing RPS resources on which the retail seller intends to rely in the future.</i></p>	<p>The City does not expect any procurement barriers to impede its future contracting for new renewable energy resources, but notes that even though a balanced, diverse RPS portfolio is desirable, the limited resource availability and lead time required for some technology types may necessitate planning flexibility. The City also observes that the rigorous demands of California's RPS program, particularly the currently effective 65 percent long-term contracting mandate, may necessitate contracting activities with a portfolio of resources that will evolve considerably over time – more specifically, the City may need to pursue initial supply commitments with a portfolio of resources that does not exactly reflect its eventual/ideal characteristics related to resource diversity and/or reliability. Pursuit of such portfolio characteristics will continue to be a work in progress during the City's first several procurement efforts and will evolve throughout the upcoming 10-year planning period.</p> <p>The key risk affecting the City's achievement of the 46 MMT and 38 MMT Preferred Conforming IRP Portfolios <a href="#">in the 2020 IRP Plan and the 30 MMT and 25 MMT portfolios in the 2022 plan</a> is reliance on new resources – while the City intends to contract with highly experienced and qualified project developers (when new-build resources are deemed necessary), there is always a limited risk of project failure.</p> <p>In consideration of the experiences of other CalChoice members and its own knowledge of the experiences of other CCAs, the City does not have any substantive concerns regarding its ability to achieve levels of renewable energy procurement that will be required to satisfy pertinent RPS mandates or IRP targets. If such concerns happen to change in the future, the City will accordingly notify the Commission in a subsequent iteration of this planning process.</p>

Dated: ~~February 17~~June 30, 2022

Respectfully submitted,

/s/ Alelia Parenteau

Alelia Parenteau  
Acting Sustainability and Resilience Director  
~~Energy and Climate Program Supervisor~~  
City of Santa Barbara  
735 Anacapa Street  
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## **Appendix B**

### **2022 RPS Procurement Plan Checklist and Verification**



**Draft 2022 RPS Procurement Plan Checklist- Task Completed**

<b>Retail seller name: City of Santa Barbara</b>	<b>YES/NO</b>	<b>NOTES</b>
I. Major Changes to RPS Plan	YES	
II. Executive Summary	YES	
III. Summary of Legislation Compliance	YES	
IV. Assessment of RPS Portfolio Supplies and Demand	YES	
IV.A. Portfolio Supply and Demand	YES	
IV.A.1. Voluntary Allocation and Market Offer (VAMO)	YES	
IV.A.2. Portfolio Optimization	YES	
IV.B. Responsive to Policies, Regulations, and Statutes	YES	
IV.B.1 Long-term Procurement	YES	
IV.C. Portfolio Diversity and Reliability	YES	
IV.D. Lessons Learned	YES	
V. Project Development Status Update	YES	
VI. Potential Compliance Delays	YES	
VII. Risk Assessment	YES	
VIII. Renewable Net Short Calculation	YES	
IX. Minimum Margin of Procurement (MMoP)	YES	
IX.A. MMoP Methodology and Inputs	YES	
IX.B. MMoP Scenarios	YES	
X. Bid Solicitation Protocol	YES	
X.A. Solicitation Protocols for Renewables Sales	YES	
X.B. Bid Selection Protocols	YES	
X.C. LCBF Criteria	YES	
XI. Safety Considerations	YES	
XII. Consideration of Price Adjustments Mechanisms	YES	
XIII. Curtailment Frequency, Forecasting, Costs	YES	
XIV. Cost Quantification	YES	
XV. Coordination with the IRP Proceeding	YES	
Appendix A: Redlined Version of the Final 2021 RPS Plan	YES	

### **Officer Verification**

I am an officer of the reporting organization herein and am authorized to make this verification on its behalf. The statements in the foregoing document are true of my own knowledge, except as to matters which are therein stated on information or belief, and as to those matters, I believe them to be true. The spreadsheet templates used within this filing have not been altered from the version issued or approved by Energy Division.

Executed on June 30, 2022 at Santa Barbara, California.

/s/ Alelia Parenteau

Alelia Parenteau  
Acting Sustainability and Resilience Director  
City of Santa Barbara  
735 Anacapa Street  
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# **Appendix C**

## **Renewable Net Short Calculation**

## Renewable Net Short Calculations - 2022 RPS Procurement Plans

<b>LSE Name:</b>	City of Santa Barbara
<b>Date Filed:</b>	6/30/22

Input required

No input required

Hard-coded

Variable	Calculation	Item	2017 Actual	2018 Actual	2019 Actual	2020 Actual	2017-2020	2021 Actual	2022 Forecast	2023 Forecast	2024 Forecast	2021-2024	2025 Forecast	2026 Forecast	2027 Forecast	2025-2027
		Forecast Year					CP 3		1	2	3	CP 4	4	5	6	CP 5
		<b>Annual RPS Requirement</b>														
A		Total Retail Sales (MWh)					-	31,605	296,814	340,609	342,312	1,011,340	344,024	345,744	347,472	1,037,240
B		RPS Procurement Quantity Requirement (%)	27.0%	29.0%	31.0%	33.0%	NA	35.8%	38.5%	41.3%	44.0%	41.2%	46.7%	49.3%	52.0%	49.3%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	-	-	-	-	-	11,299	114,273	140,501	150,617	416,690.8	160,556	170,555	180,686	511,796.9
D		Voluntary Margin of Over-procurement (MWh)					-	16,154	108,337	114,956	106,117	345,563	97,462	88,752	79,919	266,133
E	C+D	Net RPS Procurement Need (MWh)	-	-	-	-	-	27,453	222,611	255,457	256,734	762,254	258,018	259,308	260,604	777,930
		<b>RPS-Eligible Procurement</b>														
Fa		Risk-Adjusted RECs from Online Generation (MWh)					-	28,000	189,499	74,600	85,133	377,232	85,133	85,133	85,133	255,399
Faa		Forecast Failure Rate for Online Generation (%)					#DIV/0!		2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)					-					-				-
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)					#DIV/0!					#DIV/0!				#DIV/0!
Fc		Pre-Approved Generic RECs (MWh)					-					-				-
Fd		Executed REC Sales (MWh)					-					-				-
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	-	-	-	-	-	28,000	189,499	74,600	85,133	377,232	85,133	85,133	85,133	255,399
F0		Category 0 RECs					-					-				-
F1		Category 1 RECs					-	28,000	189,499	74,600	85,133	377,232	85,133	85,133	85,133	255,399
F2		Category 2 RECs					-					-				-
F3		Category 3 RECs					-					-				-
		<b>Gross RPS Position (Physical Net Short)</b>														
Ga	F-E	Annual Gross RPS Position (MWh)	-	-	-	-	-	547	(33,111)	(180,857)	(171,601)	(385,022)	(172,885)	(174,175)	(175,471)	(522,531)
Gb	F/A	Annual Gross RPS Position (%)	0%	0%	0%	0%	0%	89%	64%	22%	25%	37%	25%	25%	25%	25%
		<b>Application of Bank</b>														
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR					-	-				-	-			-
Hb		RECs above the PQR added to Bank					-					-				-
Hc		Non-bankable RECs above the PQR					-					-				-
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance					-					-				-
Ib		Planned Sales of RECs above the PQR					-					-				-
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-	-	-	-	-	-	-	-	-
J0		Category 0 RECs					-					-				-
J1		Category 1 RECs					-					-				-
J2		Category 2 RECs					-					-				-
		<b>Expiring Contracts</b>														
K		RECs from Expiring RPS Contracts (MWh)					-	13,000	125,000			138,000				-
		<b>Net RPS Position (Optimized Net Short)</b>														
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	-	-	-	-	-	547	(33,111)	(180,857)	(171,601)	(385,022)	(172,885)	(174,175)	(175,471)	(522,531)
Lb	(F+Ia-Ib-Hc)/A	Annual Net RPS Position after Bank Optimization (%)	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	#DIV/0!	0.885929486	0.638443604	0.219019462	0.248699984	0.373002056	0.24746267	0.246231513	0.24500648	0.246229471

Note: All values are to be input in MWhs

## Renewable Net Short Calculations - 2022 RPS Procurement Plans

<b>LSE Name:</b>	City of Santa Barbara
<b>Date Filed:</b>	6/30/22

Variable	Calculation	Item	2028 Forecast	2029 Forecast	2030 Forecast	2028-2030	2031 Forecast	2032 Forecast
		Forecast Year	7	8	9	CP 6	10	11
		<b>Annual RPS Requirement</b>						
A		Total Retail Sales (MWh)	349,210	350,956	352,711	1,052,876	354,474	356,247
B		RPS Procurement Quantity Requirement (%)	54.7%	57.3%	60.0%	57.3%	60.0%	60.0%
C	A*B	Gross RPS Procurement Quantity Requirement (MWh)	190,913	201,203	211,626	603,742.4	212,685	213,748
D		Voluntary Margin of Over-procurement (MWh)	70,994	62,014	52,907	185,915	53,171	53,437
E	C+D	Net RPS Procurement Need (MWh)	261,907	263,217	264,533	789,657	265,856	267,185
		<b>RPS-Eligible Procurement</b>						
Fa		Risk-Adjusted RECs from Online Generation (MWh)	85,133	85,133	85,133	255,399	85,133	35,133
Faa		Forecast Failure Rate for Online Generation (%)	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Fb		Risk-Adjusted RECs from RPS Facilities in Development (MWh)				-		
Fbb		Forecast Failure Rate for RPS Facilities in Development (%)				#DIV/0!		
Fc		Pre-Approved Generic RECs (MWh)				-		
Fd		Executed REC Sales (MWh)				-		
F	Fa+Fb+Fc-Fd	Total RPS Eligible Procurement (MWh)	85,133	85,133	85,133	255,399	85,133	35,133
F0		Category 0 RECs				-		
F1		Category 1 RECs	85,133	85,133	85,133	255,399	85,133	35,133
F2		Category 2 RECs				-		
F3		Category 3 RECs				-		
		<b>Gross RPS Position (Physical Net Short)</b>						
Ga	F-E	Annual Gross RPS Position (MWh)	(176,774)	(178,084)	(179,400)	(534,258)	(180,723)	(232,052)
Gb	F/ A	Annual Gross RPS Position (%)	24%	24%	24%	24%	24%	10%
		<b>Application of Bank</b>						
Ha	J-Hc (from previous CP)	Existing Banked RECs above the PQR	-			-	-	
Hb		RECs above the PQR added to Bank				-		
Hc		Non-bankable RECs above the PQR				-		
H	Ha+Hb	Gross Balance of RECs above the PQR	-	-	-	-	-	-
Ia		Planned Application of RECs above the PQR towards RPS Compliance				-		
Ib		Planned Sales of RECs above the PQR				-		
J	H-Ia-Ib	Net Balance of RECs above the PQR	-	-	-	-	-	-
J0		Category 0 RECs				-		
J1		Category 1 RECs				-		
J2		Category 2 RECs				-		
		<b>Expiring Contracts</b>						
K		RECs from Expiring RPS Contracts (MWh)				-	50,000	
		<b>Net RPS Position (Optimized Net Short)</b>						
La	Ga+Ia-Ib-Hc	Annual Net RPS Position after Bank Optimization (MWh)	(176,774)	(178,084)	(179,400)	(534,258)	(180,723)	(232,052)
Lb	(I+Ia-Ib-Hc)/ A	Annual Net RPS Position after Bank Optimization (%)	0.243787543	0.242574669	0.24136783	0.242572658	0.240166995	0.098619901

Note: All values are to be input in MWhs

## **Appendix D**

### **Project Development Status Update**

[illegible]

# **Appendix E**

## **Cost Quantification**



<b>LSE Name:</b>	City of Santa Barbara
<b>Date Filed:</b>	6/30/22

Input Required

Table 1: Cost Quantification (Actual Net Costs, \$)		Actual RPS-Eligible Procurement and Generation Net Costs (\$)		
1	Executed RPS-Eligible Contracts by Technology Type* (Purchases and Sales)	2019	2020	2021
2	Biogas: Digester Gas			
3	Biogas: Landfill Gas			
4	Biodiesel			
5	Biomass			
6	Muni Solid Waste			
7	Geothermal			
8	Small Hydro (Non-UOG)			\$198,875.13
9	Conduit Hydro			
10	Water Supply / Conveyance			
11	Ocean Wave			
12	Ocean Thermal			
13	Tidal Current			
14	Solar PV (Non-UOG)			
15	Solar Thermal			
16	Wind			\$1,702,292.71
17	Unbundled RECs (REC Only)			
18	Various (Index Plus REC)***			
19	Fuel Cell			
20	UOG: Small Hydro			
21	UOG: Solar PV			
22	UOG: Other			
23	Executed REC Sales (Revenue)			
24	<b>Total RPS-Eligible Procurement and Generation Net Cost</b>	<b>\$0</b>	<b>\$0</b>	<b>\$1,901,168</b>
25	Total Retail Sales (MWh)			31,605.22
26	<b>Incremental Rate Impact</b>	<b>#DIV/0!</b>	<b>#DIV/0!</b>	<b>6.015359434</b>

LSE Name: City of Santa Barbara  
Date Filed: 6/30/22

Input Required

No Input Required

Table 2: Cost Quantification (Forecast Costs and Revenues, \$)		Forecast RPS-Eligible Procurement Costs and Revenues (\$)										
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales)**	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2	Biogas: Digester Gas											
3	Biogas: Landfill Gas											
4	Biodiesel											
5	Biomass											
6	Muni Solid Waste											
7	Geothermal											
8	Small Hydro (Non-UOG)											
9	Conduit Hydro											
10	Water Supply / Conveyance											
11	Ocean Wave											
12	Ocean Thermal											
13	Tidal Current											
14	Solar PV (Non-UOG)											
15	Solar Thermal											
16	Wind											
17	Unbundled RECs (REC Only)											
18	Various (Index Plus REC)***											
20	Fuel Cell											
21	UOG: Small Hydro											
22	UOG: Solar PV											
23	UOG: Other											
24	Executed REC Sales (Revenue)											
25	Total Executed But Not Approved RPS-Eligible Procurement and Generation Cost	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
26	Total Retail Sales (MWh)	296,814.00	340,609.00	342,312.05	344,023.61	345,743.72	347,472.44	349,209.80	350,955.85	352,710.63	354,474.19	356,246.56
27	Incremental Rate Impact	0	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh	0.00 ¢/kWh
28	Executed RPS-Eligible Contracts (Purchases and Sales)****	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
29	Biogas: Digester Gas											
30	Biogas: Landfill Gas											
31	Biodiesel											
32	Biomass											
33	Muni Solid Waste											
34	Geothermal											
35	Small Hydro (Non-UOG)	\$11,814.453										
36	Conduit Hydro											
37	Water Supply / Conveyance											
38	Ocean Wave											
39	Ocean Thermal											
40	Tidal Current											
41	Solar PV (Non-UOG)											
42	Solar Thermal											
43	Wind	\$6,286,662	\$6,737,101	\$6,518,376	\$6,125,275	\$5,825,234	\$5,457,300	\$5,499,500	\$5,542,123	\$5,585,172	\$5,628,651	\$2,292,636
44	Unbundled RECs (REC Only)											
45	Various (Index Plus REC)***											
47	Fuel Cell											
48	UOG: Small Hydro											
49	UOG: Solar PV											
50	UOG: Other											
51	Executed REC Sales (Revenue)											
52	Total Executed and Approved RPS-Eligible Procurement and Generation Cost	\$18,100,115	\$6,737,101	\$6,518,376	\$6,125,275	\$5,825,234	\$5,457,300	\$5,499,500	\$5,542,123	\$5,585,172	\$5,628,651	\$2,292,636
53	Total Retail Sales (MWh)	296,814	340,609	342,312	344,024	345,744	347,472	349,210	350,956	352,711	354,474	356,247
54	Incremental Rate Impact	6.098133991	1.977957446	1.904220604	1.780480981	1.684841648	1.570570613	1.574841377	1.579151016	1.583499636	1.587887341	0.643553237
55	Total RPS-Eligible Procurement and Generation Cost	\$18,100,115	\$6,737,101	\$6,518,376	\$6,125,275	\$5,825,234	\$5,457,300	\$5,499,500	\$5,542,123	\$5,585,172	\$5,628,651	\$2,292,636
56	Total Incremental Rate Impact	6.098133991	1.977957446	1.904220604	1.780480981	1.684841648	1.570570613	1.574841377	1.579151016	1.583499636	1.587887341	0.643553237

\*Note: Technology definitions are given in the POC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>  
\*\*Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.  
\*\*\*Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known  
\*\*\*\*Note: For IOUs and SMUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.

<b>LSE Name</b>	City of Santa Barbara		Input Required	
<b>Date Filed</b>	6/30/22			

Table 3: Cost Quantification (Actual Procurement / Generation and Sales, MWh)		Actual RPS-Eligible Procurement / Generation and Sales (MWh)		
1	Technology Type* (Procurement / Generation and Sales)	2019	2020	2021
2	Biogas: Digester Gas			
3	Biogas: Landfill Gas			
4	Biodiesel			
5	Biomass			
6	Muni Solid Waste			
7	Geothermal			
8	Small Hydro (Non-UOG)			3,000
9	Conduit Hydro			
10	Water Supply / Conveyance			
11	Ocean Wave			
12	Ocean Thermal			
13	Tidal Current			
14	Solar PV (Non-UOG)			
15	Solar Thermal			
16	Wind			25,000
17	Unbundled RECs (REC Only)			
18	Various (Index Plus REC)***			
19	Fuel Cell			
20	UOG: Small Hydro			
21	UOG: Solar PV			
22	UOG: Other			
23	Executed REC Sales (MWh)			
24	Total RPS Eligible Procurement (MWh)	0	0	28,000

LSE Name City of Santa Barbara Input Required No Input Required

Date Filed 6/30/22

Forecast RPS-Eligible Procurement / Generation and Sales (MWh)												
1	Executed But Not Approved RPS-Eligible Contracts (Purchases and Sales) **	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
2	Biogas: Digester Gas											
3	Biogas: Landfill Gas											
4	Biodiesel											
5	Biomass											
6	Muni Solid Waste											
7	Geothermal											
8	Small Hydro (Non-UOG)											
9	Conduit Hydro											
10	Water Supply / Conveyance											
11	Ocean Wave											
12	Ocean Thermal											
13	Total Current											
14	Solar PV (Non-UOG)											
15	Solar Thermal											
16	Wind											
17	Unbundled RECs (REC Only)											
18	Various (Index Plus REC)***											
20	Fuel Cell											
21	UOG: Small Hydro											
22	UOG: Solar PV											
23	UOG: Other											
24	Executed REC Sales (MWh)											
25	Total Executed But Not Approved RPS-Eligible Procurement	0	0	0	0	0	0	0	0	0	0	0
26	Executed and Approved RPS-Eligible Contracts (Purchases and Sales) ****	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
27	Biogas: Digester Gas											
28	Biogas: Landfill Gas											
29	Biodiesel											
30	Biomass											
31	Muni Solid Waste											
32	Geothermal											
33	Small Hydro (Non-UOG)	125,000										
34	Conduit Hydro											
35	Water Supply / Conveyance											
36	Ocean Wave											
37	Ocean Thermal											
38	Total Current											
39	Solar PV (Non-UOG)											
40	Solar Thermal											
41	Wind	64,499	74,600	85,133	85,133	85,133	85,133	85,133	85,133	85,133	85,133	35,133
42	Unbundled RECs (REC Only)											
43	Various (Index Plus REC)***											
45	Fuel Cell											
46	UOG: Small Hydro											
47	UOG: Solar PV											
48	UOG: Other											
49	Executed REC Sales (MWh)											
50	Total Executed and Approved RPS-Eligible Procurement	189,499	74,600	85,133	85,133	85,133	85,133	85,133	85,133	85,133	85,133	35,133
51	Total RPS Eligible Procurement (MWh)	189,499	74,600	85,133	85,133	85,133	85,133	85,133	85,133	85,133	85,133	35,133

\*\*Note: Technology definitions are given in the PCC Classification Handbook located in the RPS Compliance Reporting section of: <https://www.cpuc.ca.gov/RPSComplianceReporting/>

\*\*\*Note: For contracts that have been executed but still require formal approval (CPUC or other formal approval process) for purchases and sales.

\*\*\*\*Note: The "Various" technology type is to be used in the case of contracts encompassing multiple facilities where the generation type is not yet known.

\*\*\*\*\*Note: For IOUs and SMUs: Include all executed contracts that required CPUC approval. For CCAs and ESPs: Include all executed contracts that have been approved through relevant formal approval processes.